# Operating Instructions

AUDIO/VIDEO STEREO RECEIVER

# VSX-605S
# VSX-635S

ISC Intelligent System Control

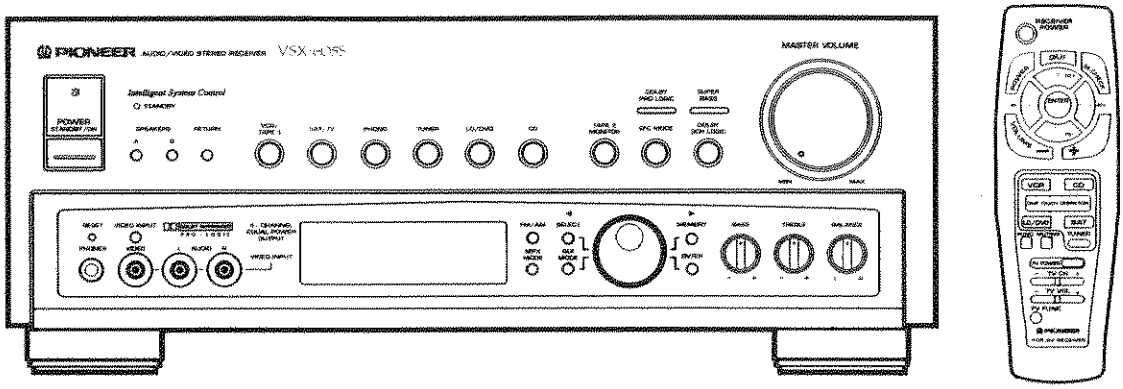



Illustration shows VSX-605S.

Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However the method of connecting and operating the unit is the same.

## IMPORTANT NOTICE

## [For U.S. and Canadian models]

**The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.**

## [For Canadian model]

**CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.**

**ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.**

THE POWER SWITCH IS SECONDARY CONNECTED AND THEREFORE DOES NOT SEPARATE THE UNIT FROM MAINS POWER IN STANDBY POSITION.

| | |
|---|---|
| Round 2-pin AC plug model | PAL |
| U.S. and Canadian model | NTSC |
| Multi-voltage model | PAL/NTSC |

## DEMO MODE

- The demonstration mode is activated by turning on the power switch while holding down the RETURN button (from power standby condition). The demonstration will appear on the display. When this mode is set, SURROUND settings will be set to the initial values.
- Press any button to cancel the demonstration.

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

### RETURN function

This function returns the unit to its initial settings with the tuner ready to receive a broadcast. This is helpful during troubleshooting or when no sound is output. For details, refer to page 14.

### RESET function

Set the MASTER VOLUME to minimum before pressing the RESET button.
Use this function when normal operation is not possible due to external influences such as static electricity or lightning, or when operations are not functioning even when the operation switches are pressed. Press the RESET button to return to normal operating conditions.

PIONEER
*The Art of Entertainment*

# IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

**CAUTION**
RISK OF ELECTRIC SHOCK
DO NOT OPEN

**CAUTION:**
**TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

# SAFETY INSTRUCTIONS

**READ INSTRUCTIONS** – All the safety and operating instructions should be read before the appliance is operated.

**RETAIN INSTRUCTIONS** – The safety and operating instructions should be retained for future reference.

**HEED WARNING** – All warnings on the appliance and in the operating instructions should be adhered to.

**FOLLOW INSTRUCTIONS** – All operating and use instructions should be followed.

**WATER AND MOISTURE** – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet base-ment, or near a swimming pool, etc.

**LOCATION** – The appliance should be installed in a stable location.

**WALL OR CEILING MOUNTING** – The appliance should not be mounted to a wall or ceiling.

**VENTILATION** – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

**HEAT** – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

**POWER SOURCES** – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

**POWER-CORD PROTECTION** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

**POLARIZATION** – If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

**CLEANING** – The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

**POWER LINES** – An outdoor antenna should be located away from power lines.

**NONUSE PERIODS** – The power cord of the appliance should be unplugged from the outlet when left un-used for a long period of time.

**OBJECT AND LIQUID ENTRY** – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

**DAMAGE REQUIRING SERVICE** – The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been dam-aged.
- Objects have fallen, or liquid has been spilled into the appliance.
- The appliance has been exposed to rain.
- The appliance does not appear to operate normally or exhibits a marked change in performance.
- The appliance has been dropped or the enclosure damaged.

**SERVICING** – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

**OUTDOOR ANTENNA GROUNDING** – If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

**CART** – An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

NEC – NATIONAL ELECTRIC CODE

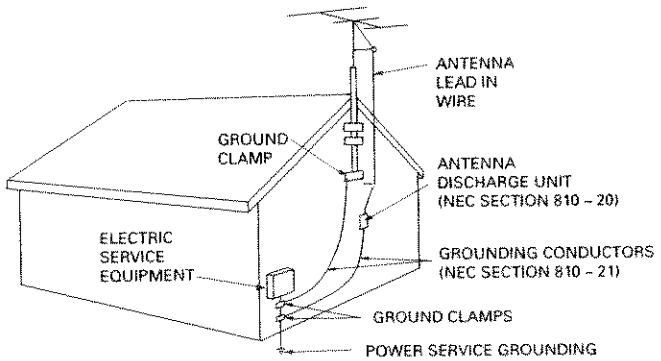


**FIG. A**

## Information to User

Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

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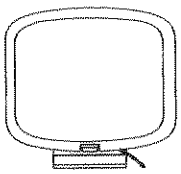
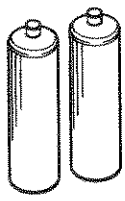
# ACCESSORY ITEMS

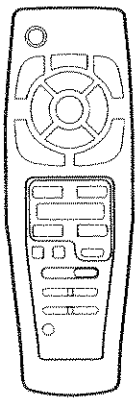
FM antenna



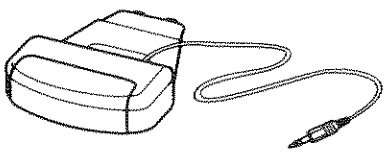
AM Loop Antenna



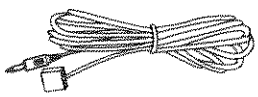
Dry cell battery (AA/R6P) ×2



Remote control unit



Main-Repeater



Mini-Repeater

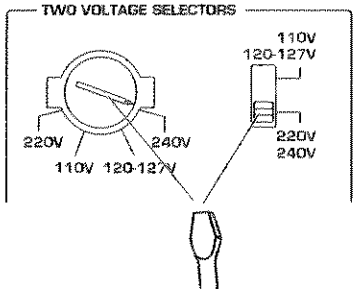
# BEFORE OPERATING, ADJUST THE POSITION OF THE THESE SWITCHES

## TWO VOLTAGE SELECTOR SWITCHES

**Only multi-voltage model is provided with these switches. Round 2-pin AC plug, U.S. and Canadian models are not provided with these switches. Mains voltages in Saudi Arabia are 127 V and 220 V only. Never use this model with the 110 V setting in Saudi Arabia.**

The line voltage selector switches are on the rear panel. Check that they are set properly before plugging the power cord into the household wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switches as follows.

1. Use a medium-size screwdriver.
2. First, insert the screwdriver in the groove of the voltage selector at the right, and adjust so that the tip of the groove points to the voltage value of your area.
3. Next, insert the screwdriver in the groove of the voltage selector at the left and adjust until the voltage is the same as at the right.




**Medium-size screwdriver**

## CHANNEL STEP SWITCH (Multi-voltage model only)

The unit has been factory preset to the channel allocation value for the area in which it is to be sold. If this value is set incorrectly, the tuned in frequency may be wrong, or sound may be distorted, resulting in an inability to reproduce reception signals at their proper sound quality. For this reason, be sure to confirm that the values are set correctly before first using the unit.

### (FM 100 kHz/AM 10 kHz) position:

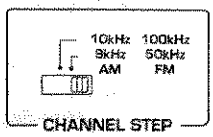
Set to this position for areas with an FM reception step of 100 kHz and AM 10 kHz.

### (FM 50 kHz/AM 9 kHz) position:

Set to this position, for areas with an FM reception step of 50 kHz and AM 9 kHz.

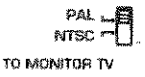
***NOTE:***

*When unsure about the channel allocation for your area, consult your dealer for correct information.*




## PAL/NTSC SWITCH (Multi-voltage model only)

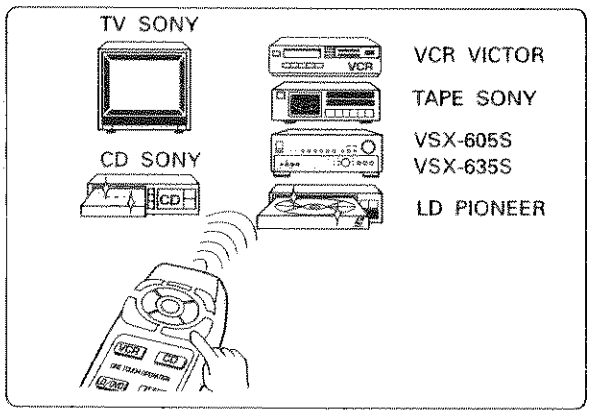
This unit uses the TV screen to operate the system. Set the rear panel PAL/NTSC switch to match your TV's color system. The screen will be unclear if the color system does not match.




## *ISC Intelligent System Control*

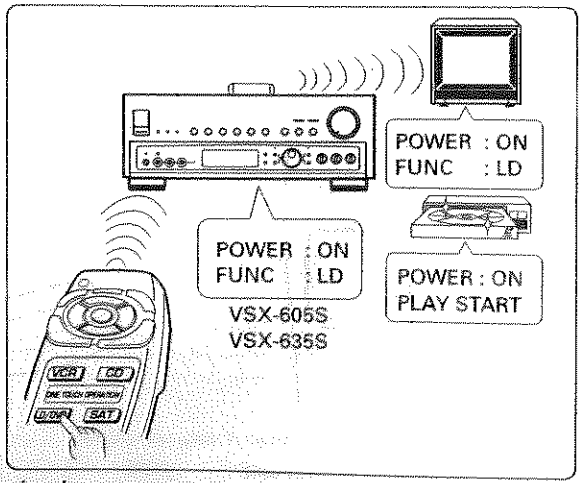
ISC is a new method of operating AV equipments proposed by Pioneer. It allows the following equipments made by other manufacturers to be controlled easily with the VSX-605S/VSX-635S and accompanying remote control unit.

**■ Control of Equipments Made by Other Manufacturers**




Present Pioneer products or products made by other manufacturers (video deck, TV, LD player, CD player, etc.) can be easily controlled using GUI or the remote control unit by presetting the remote control codes other manufacturers provided or presetting by learning. (Pages 30 and 31)

**■ One-Touch Operation**




Previously, numerous components had to be operated in order to listen to CDs or watch LDs. Now, these can be done by one-touch operation (using only one key) by presetting the operation procedure on the operation screen. (Page 32)

# SURROUND EFFECT

This unit has a built-in surround processor for adding presence and an expansive effect to the sound.

### STUDIO:
Select this position to enjoy the effect of listening to music in a recording studio.
The actual source sound is output through the front speakers, and the added reverberated sound is output through the rear speakers.
This is particularly suitable for a source that has a lot of reverberation.

### SIMULATED SURROUND:
The "SIMULATED SURROUND" creates the effects of reverberated and reflected sound from the walls and ceiling similar to a concert hall. These sound-effects added to the actual sound from the source make you feel as if you were in a more expanded space. The different ranges of the expanded space can be set by the DELAY TIME button.
Set the Delay Time to 15 ms or 20 ms for a live-house concert. For chamber music, set to 20 ms. For orchestral music, set to 30 ms. The "SIMULATED SURROUND" also gives effects on monaural sources by outputting the added reverberated sound from the rear speakers while outputting the actual source sound from the front speakers. Turn on the "SIMULATED SURROUND" for a monaural source to gain effective surround playback.

### ARENA:
This is ideal for sources such as live performances. Music is output from the front speakers and the sounds and applause of the audience are output through the rear speakers. Adjusting the delay time provides the effects of listening in halls of different sizes.

### DOLBY* PRO LOGIC SURROUND:
Choose this setting for movies and music (especially Video Discs and video tapes bearing the DOLBY SURROUND mark) playback. DOLBY PRO LOGIC SURROUND continuously detects the size and direction of the dominant signal and cancels undesirable crosstalk, thereby providing signal emphasis. It makes you clearly perceive the directional source of the music. Real flow of sound also can be re-created naturally using this feature. You can feel as if being in an outstanding and expansive sound field. When using DOLBY PRO LOGIC SURROUND, a delay time setting of 20 ms is commonly used. Use a different setting if you prefer. Even if the video recordings do not bear the DOLBY SURROUND mark, some of them may be Dolby Surround encoded. Choose the SIMULATED SURROUND mode if the source sound signal is mono. Little or no sound will be heard from the surround speakers if the DOLBY PRO LOGIC SURROUND mode is selected. With DOLBY PRO LOGIC SURROUND, monaural source sound will be heard only from the center channel at settings other than the PHANTOM position.

> ***Note:***
> *Dolby Surround will not operate correctly if the signal passes through a graphic equalizer. When using Dolby Surround, turn off the TAPE 2 MONITOR or set the graphic equalizer for flat response or to its "through" (or off) setting, if you have one in use.*

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# DOLBY 3CH LOGIC

Combining the rear speaker signal with that of the front speakers results in your being able to enjoy a regenerated sound field which has comparatively more presence and a more expansive feeling from the front 3 channels (front L, front R, and center speakers) than that of ordinary stereo regeneration. DOLBY 3CH LOGIC can be used with stereo sources not encoded with DOLBY SURROUND.

# DOLBY PRO LOGIC SURROUND, DOLBY 3CH LOGIC CENTER MODE

**(For DOLBY PRO LOGIC SURROUND and DOLBY 3CH LOGIC)**

You can choose from the following settings:

### Center Mode Choices:

When using a center speaker:

- **NORMAL**–Low range frequencies, which have little effect on directionality and positioning, are routed to the left and right front speakers. This allows you to use a relatively small size speaker as the center speaker.
- **WIDE**–If you use a large size center speaker, choose this setting. The full frequency range of the Dolby Surround center channel, is routed to the center speaker.

When not using a center speaker: DOLBY PRO LOGIC SURROUND only

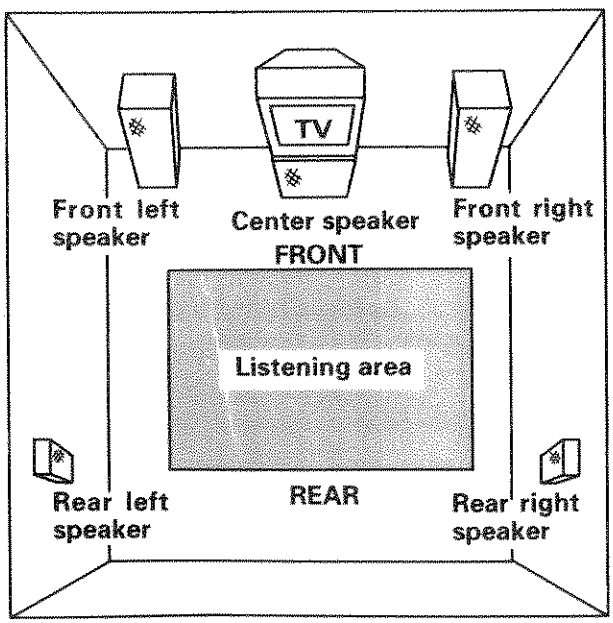
- **PHANTOM**–The signal which would have been sent to the center speaker is divided equally between the left and right front speakers.

  With DOLBY PRO LOGIC SURROUND, monaural source sound will be heard only from the center channel at settings other than the PHANTOM position.

# SPEAKER INSTALLATION

To get the most out of the surround system, place the speakers as shown below.

**An example of speaker location**




If the rear speakers are positioned at an extreme distance from the front and center speakers, the surround level becomes unable to adjust and the surround effect will not be fully achieved.

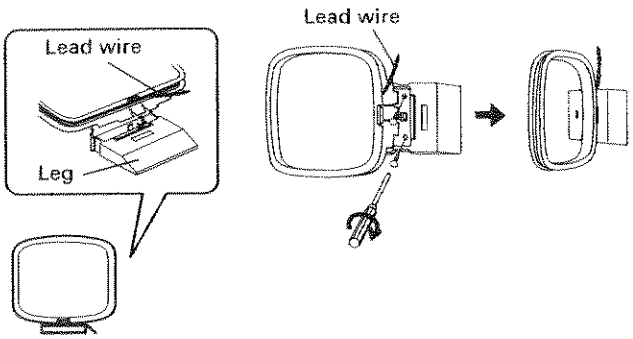
***NOTES:***

- *To avoid interference with the picture on a nearby TV set, use magnetically shielded speaker systems. This is particularly important for the center speaker since it is usually located closest to the TV.*
- *Position the left and right channel speakers at equal distances from the TV set and approximately 1.8 m (6 feet) from each other.*
- *Position the center speaker above, below, or behind the TV set. Sound may not appear to coincide with the picture if you position it next to the TV set.*
- *Rear speakers are best positioned slightly above ear level.*

# CONNECTIONS

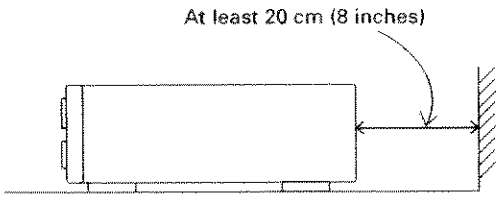
## Setting Up the AM Antenna

- Insert the claw on the bottom of the antenna into the groove in the leg.
- Place the antenna on a level surface and rotate it to locate the orientation that yields the best reception.
- Use the attachment hole in the leg to screw to a wall or other location, then insert the claw on the bottom of the antenna into the groove in the leg (fixing the antenna in the direction that gives the best reception.)



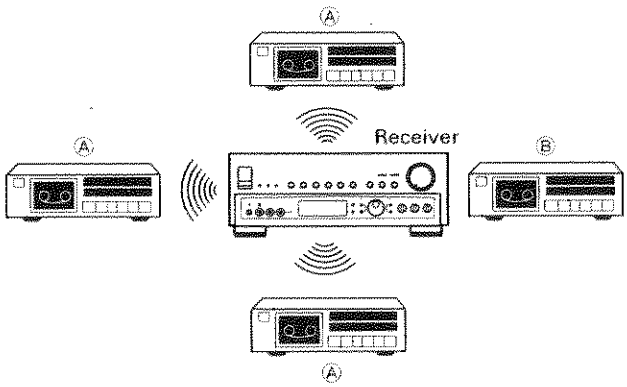

## Installation Precautions

- The rear panel vents are designed to disperse heat from the unit. Be careful that curtains or other items do not block the vents.
- To improve heat dispersion, set the unit so that it is at least 20 cm (8 inches) away from the wall.




## Precaution regarding installation position of cassette deck

If the cassette deck is installed in the Ⓐ positions shown in the drawing below, it may be adversely affected during playback. If possible, it's better to install it in the Ⓑ position.




### POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

## AUDIO SYSTEM CONNECTIONS

Illustration shows Multi-voltage model.

Before making or changing the connections, switch off the power switch and disconnect the power cord from the AC outlet.

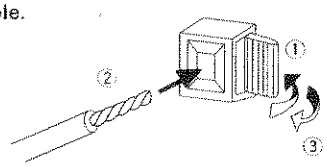
***NOTE FOR FM ANTENNA:***
*Stretch the antenna out to its full length, and affix it to a wall, etc.*

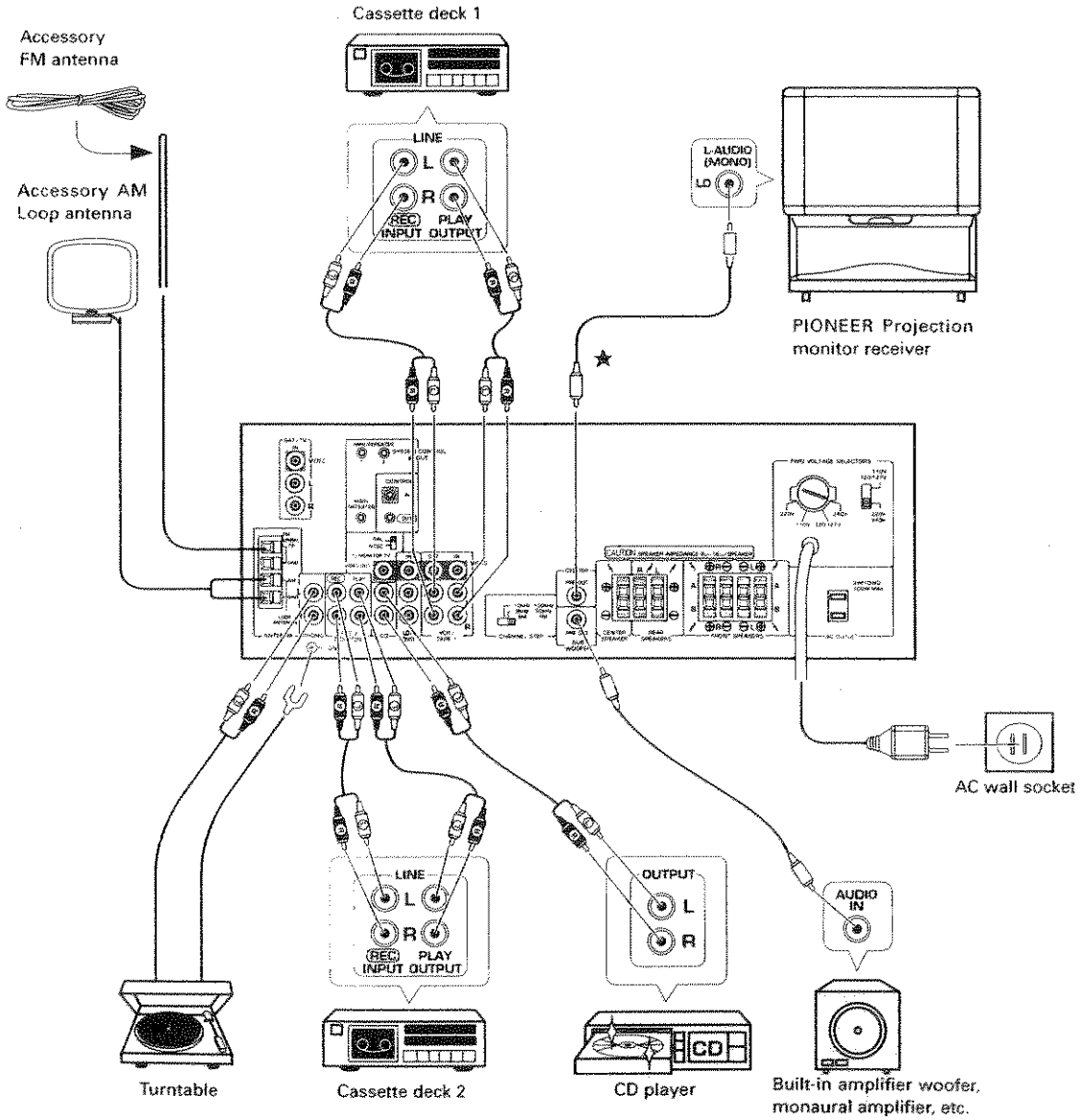
***NOTE FOR AM LOOP ANTENNA:***
*The antenna should be placed at a distance from the receiver, and should not be allowed to touch metallic objects. Avoid placing it near CD players, personal computers, television sets, and other devices generating radio frequencies.*

★ Connect when using a PIONEER projection monitor receiver's built-in speaker as a center speaker.
Refer to the projection monitor's operating instructions for details concerning connection and operation.

**AM loop antenna and FM antenna connection**

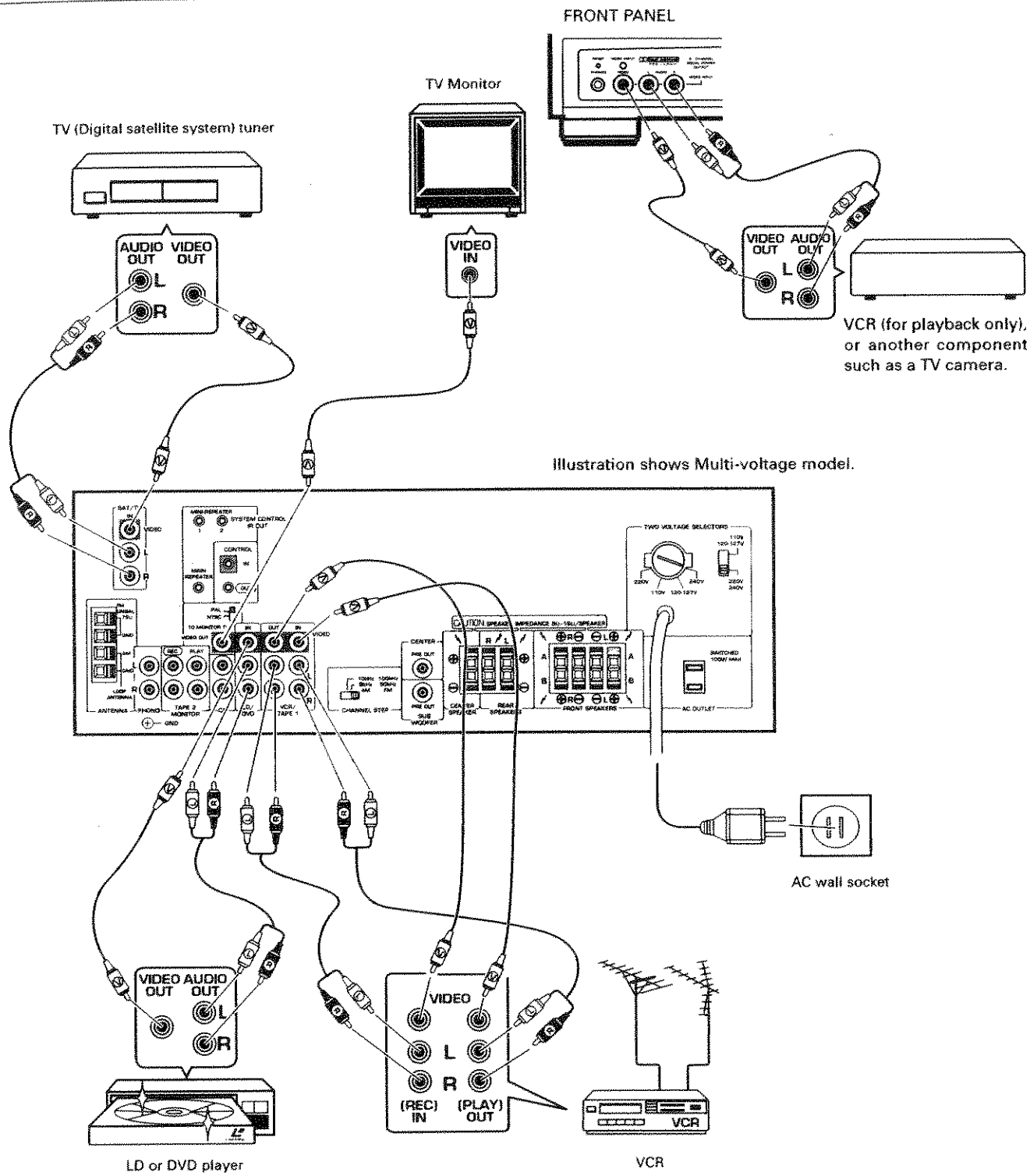
① Push the lever.
② Insert the wire into the hole.
③ Pull the lever back.




To connect the Pioneer Powered Subwoofer (S-W700 or S-W99), connect the receiver's SUB WOOFER output to the subwoofer's input.

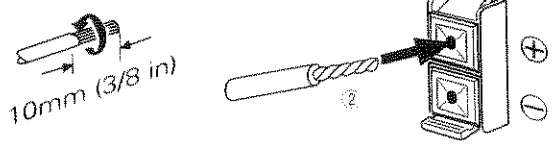
## VIDEO SYSTEM CONNECTIONS



## SPEAKER CONNECTIONS

**Speaker cord connection**

① Push the lever down (or up).
② Insert the cord into the hole.
③ Pull the lever back.




***NOTE:***
*Use speakers with an impedance of 8 Ω to 16 Ω.*

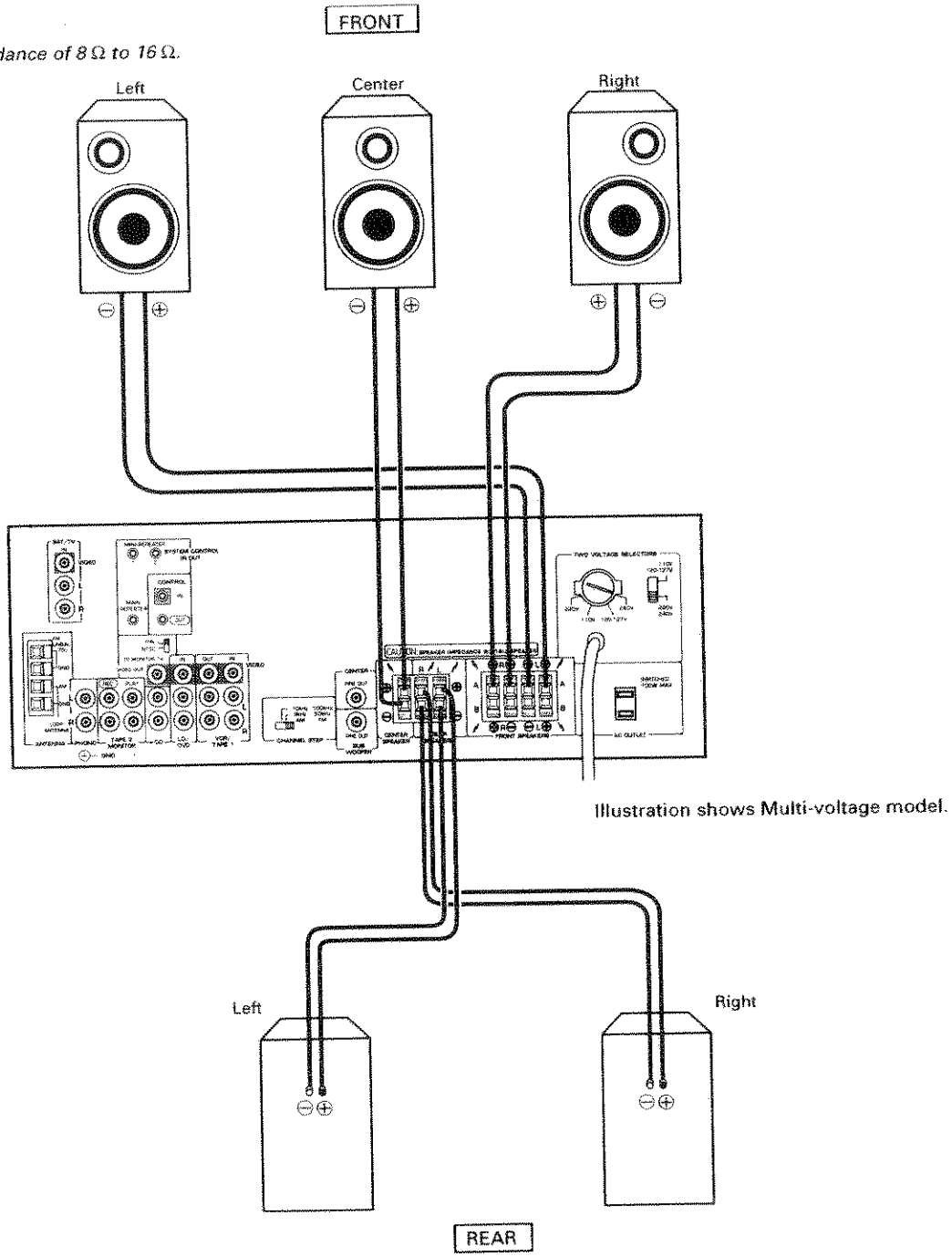



Illustration shows Multi-voltage model.

## IR Repeater connection

Connecting a supplied IR Repeater lets you also control other components with this unit's remote control.

***NOTE:***

*To operate components not made by Pioneer, perform REMOTE SET UP (P.30) after connecting an IR Repeater.*

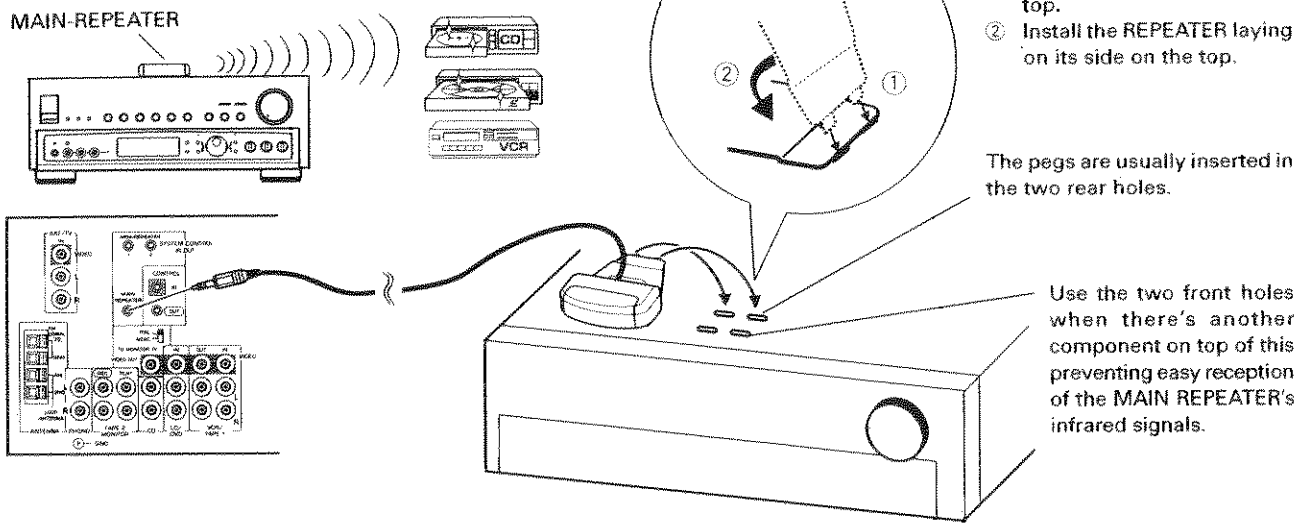
Remote control signals directed towards this unit or GUI operation signals are transmitted from the repeater as infrared signals, enabling control of other components.

There are two kinds of infrared repeaters. Connect either or both to match the remote control requirements of different components.

### MAIN-REPEATER

Use this to operate other components with this unit's remote control or to operate using GUI on-screen indications.

Install on top of thus unit as shown in the figure.




① Insert the REPEATER's two pegs into the holes on the top.

② Install the REPEATER laying on its side on the top.

The pegs are usually inserted in the two rear holes.

Use the two front holes when there's another component on top of this preventing easy reception of the MAIN REPEATER's infrared signals.

### MINI-REPEATER

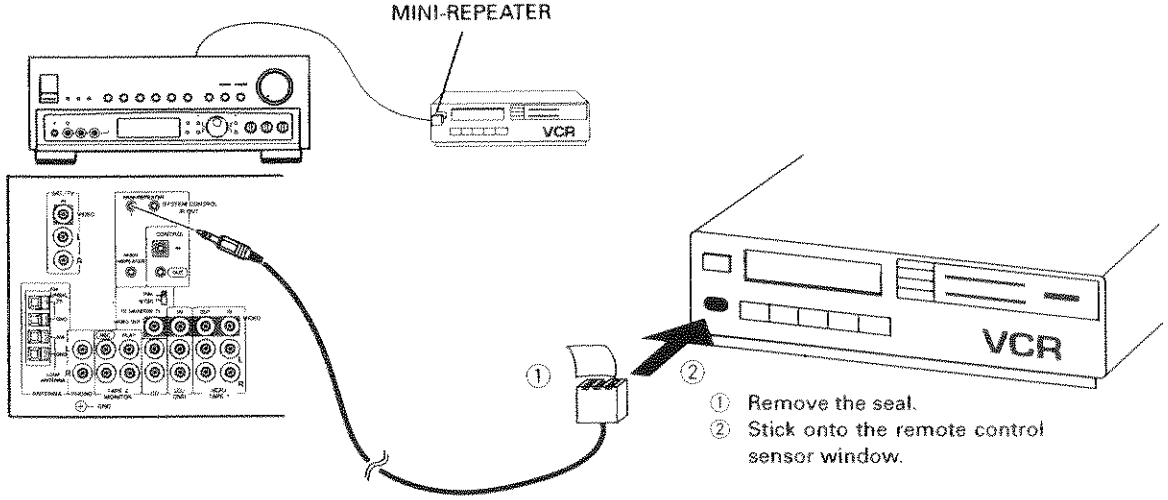
Use this when a component operates incorrectly after receiving a signal from this unit's remote control, or when it is difficult for a component to receive signals from the Main-Repeater. Stick it directly on the remote control sensor window.

There are two MINI-REPEATER terminals.

If you need another Mini-repeater, contact your nearest Pioneer Service Center.

***NOTE:***

*To prevent possible damage, be careful to avoid accidentally connecting the MINI-REPEATER to the MAIN-REPEATER terminals.*

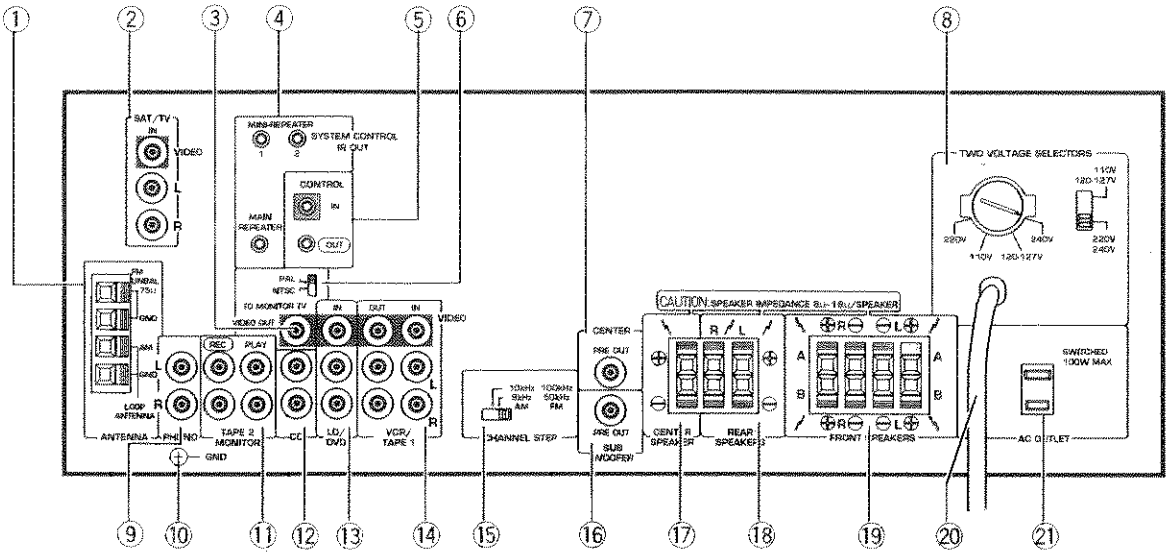



① Remove the seal.

② Stick onto the remote control sensor window.

# REAR PANEL FACILITIES

Illustration shows Multi-voltage model.




## ① FM/AM ANTENNA terminals

Use these antenna terminals for reception of normal FM and AM broadcasts.

## ② SAT(Satellite)/TV jacks (input)

Use these jacks if you wish to connect a TV (Digital satellite system) tuner with both video and audio optputs.

## ③ VIDEO OUT (TO MONITOR TV) jack

Connect to a monitor TV or to TV sets with video input terminals to watch program materials from a VCR or LD player connected to this unit.

## ④ SYSTEM CONTROL IR OUT jacks

To operate other components with this unit's remote control or with GUI, connect the supplied repeater (See page 11).

**MINI-REPEATER 1,2:**

connect the supplied MINI-REPEATER.

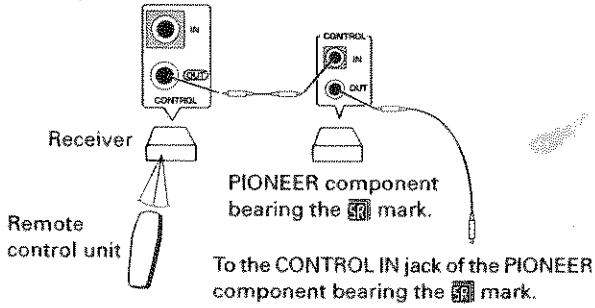
**MAIN-REPEATER:**

connect the supplied MAIN-REPEATER.

## ⑤ CONTROL IN/OUT jacks

**IN** :Connects this jack to the control out jack of an unit attached SR mark using a commercially available cord with mini-plugs (without load). The remote control signal sensor of this unit will not receive the remote control signal while connecting. The unit attached SR mark can be operated using a remote control through the connected cord from the remote control sensor of another unit attached SR mark.

**OUT** :Connects this jack to the control input jack of an unit attached SR mark using a commercially available cord with mini-plugs (without load).
Outputs the remote control signal to another unit from this unit or the relay signal from the control input jack.




*NOTE:*

- ***If there is a plug in this unit's CONTROL IN jack, ISC and GUI operations using the remote control unit are not possible.***
- *The remote control unit provided with this unit adopts a different method from the remote control units of Pioneer systems. Consequently, this unit and other components will not operate when the remote control unit is directed at the remote control signal sensor window of the connected components.*
  *Other components will not operate unless a signal is received by the sensor window of this unit, and this unit consequently converts the signal received to the remote control signal corresponding to the other component.*

### ⑥ PAL/NTSC switch (Multi-voltage model only)

See page 4.

### ⑦ CENTER PRE OUT jack

When a separate power amplifier is used to drive the surround center speaker, connect the power amplifier to this jack.

### ⑧ TWO VOLTAGE SELECTORS switches (Multi-voltage model only)

See page 4.

### ⑨ PHONO input jacks

Connect to the output cables from a turntable.

### ⑩ GND terminal

Connect the turntable ground lead to this terminal.

***NOTE:***

*This is used to decrease noise and does not serve as a complete ground.*

### ⑪ TAPE 2 MONITOR jacks

Connect to audio components such as a second cassette deck or a graphic equalizer.

### ⑫ CD input jacks

Connect to the output jacks of a compact disc player.

### ⑬ LD/DVD input jacks

Connect to an LD player's output jacks (audio, video) or a DVD player's output jacks (audio, video).

### ⑭ VCR/TAPE 1 jacks

Connect to a VCR or the first cassette deck. With a VCR, also connect the video jacks.

### ⑮ CHANNEL STEP switch (Multi-voltage model only)

See page 4.

### ⑯ SUB WOOFER PRE OUT jack

If you want to boost the low frequencies, connect to a subwoofer power amplifier.

### ⑰ CENTER SPEAKER terminals

Connect the center speaker to these terminals.

***NOTE:***

*Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctions or breakdowns may occur when conductors come into contact with each other. Use a center speaker with an impedance of 8Ω to 16 Ω.*

### ⑱ REAR SPEAKERS terminals

Connect the rear speakers to these terminals.

***NOTES:***

- *Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctions or breakdowns may occur when conductors come into contact with each other. Use rear speakers with an impedance of 8 Ω to 16 Ω.*
- *Be sure to connect two speakers (L, R). There will be no sound if only one speaker is connected.*

### ⑲ FRONT SPEAKERS terminals

**A** :Connect to the first set of speakers.
**B** :Connect to the second set of speakers.

***NOTE:***

*Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctions or breakdowns may occur when conductors come into contact with each other. Use front speakers with an impedance of 8Ω to 16Ω.*

### ⑳ Power cord

### ㉑ AC OUTLET (Multi-voltage, U.S. and Canadian models only)

(U.S. and Canadian models)

**[SWITCHED 100 W (0.8 A) MAX]**

Power supplied through this outlet is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W (0.8 A).

(Multi-voltage model)

**[SWITCHED 100 W MAX]**

Power supplied through this outlet is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W.

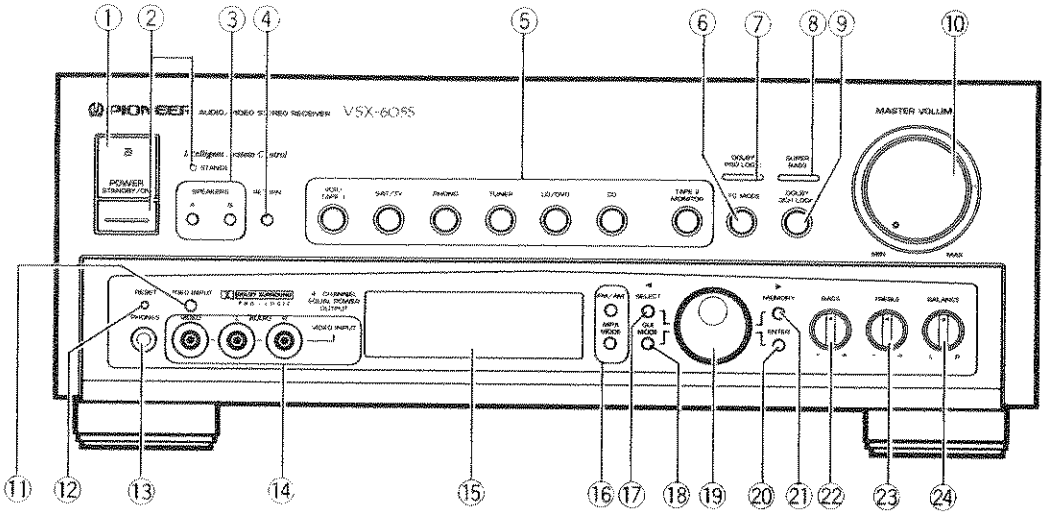
***NOTES:***

- *This unit should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.*
- *Do not connect appliances with high power consumption such as heaters, irons, or television sets to this AC OUTLET in order to avoid overheating and fire risk. This can cause the receiver to malfunction.*

**CAUTION:**
**DO NO CONNECT MONITOR OR TV SET.**

# FRONT PANEL FACILITIES

Illustration shows multi-voltage model.




## ① Remote sensor

## ② POWER STANDBY/ ON switch STANDBY indicator (Multi-voltage and Round 2-pin AC plug models only)

This is the switch for electric power.

**ON** :When set to the ON position, power is supplied and the unit becomes operational.

**STANDBY** :When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

**(Multi-voltage and Round 2-pin AC plug models only)**

The STANDBY indicator lights when the power is set to STANDBY, and goes out when set to ON.

**(Timer ON/OFF possible)**

When the unit is switched ON, ON/OFF control can be performed by means of the optional timer.

***NOTE:***

*When the power is initially turned ON, muting will be applied to prevent sound from being output for about 5 seconds.*

## ③ SPEAKERS buttons (A, B)

ON/OFF switches for the A and B speaker systems.

## ④ RETURN button

Press this button to return the receiver to its initial state. TUNER is selected at this initial state. Adjust the sound level by using the MASTER VOLUME control.

TAPE 2 MONITOR ..... OFF
SFC MODE ..... OFF
SUPER BASS ..... OFF
PRO LOGIC ..... OFF
3CH LOGIC ..... OFF
MUTE ..... OFF
FUNCTION ..... TUNER

And SPEAKERS buttons switch as follows.

| Before pressing the RETURN button | | After pressing |
|---|---|---|
| Both A and B are off | → | Only A is on |
| Only A is on | → | No change |
| Only B is on | → | Both A and B are on |
| Both A and B are on | → | No change |

***NOTE:***

*Press the RETURN button, and the frequency last selected is received. If reception of the frequency last selected is not possible, the mode automatically switches to AUTO TUNING.*

## ⑤ Input selector buttons

**VCR/TAPE 1**
:Press when performing playback on a VCR unit or cassette deck.

**SAT/TV** :Press to watch TV broadcasts from the TV (Digital satellite system) tuner connected to the rear panel SAT/TV IN jacks.

**PHONO** :Press when playing records on a turntable.

**TUNER** :Press when listening to radio broadcasts.

**LD/DVD** :Press when performing playback on an LD or a DVD player.

**CD** :Press when playing compact discs on a CD player.

**TAPE 2 MONITOR**
:Press when performing playback on a second cassette deck and when monitoring recording.

### ⑥ SFC MODE button *
Each time you press it, the mode and the display indications change as follows.

STUDIO → SIMULATED SURROUND → ARENA → off

### ⑦ DOLBY PRO LOGIC button *
Switches DOLBY PRO LOGIC SURROUND on and off.

### ⑧ SUPER BASS button *
Press this button when you want to boost the bass.

### ⑨ DOLBY 3CH LOGIC button *
Select this setting when stereo-source regeneration and rear speakers are not connected and you wish to use the front L, front R, and center speakers to enjoy audio/visual material bearing the DOLBY SURROUND mark.

### ⑩ MASTER VOLUME control
Use it to simultaneously adjust the sound volume from the front, center, and rear speakers.

### ⑪ VIDEO INPUT selector button
Press when performing playback on a VCR connected to VIDEO INPUT jacks on the front panel.

### ⑫ RESET button
Use this when normal operation is not possible because of external influences such as static electricity or lightning, or when operations are not functioning even when operation buttons are pressed. Press this button to return to normal operating conditions.

### ⑬ PHONES jack
Connect the plug on your headphones to this jack. Set SPEAKERS A and B switches to OFF if you want to cut the sound from the speakers and listen to it only through the headphones.

### ⑭ VIDEO INPUT jacks
VIDEO components such as a VCR or TV camera, etc. can be connected.

### ⑮ Display section
See page 16.

### ⑯ Tuner operation buttons
**FM/AM button:**
Use this to switch between FM and AM frequency band reception.

**MPX MODE button:**
Use to select the auto stereo mode or monaural mode when listening to FM broadcasts. The monaural mode has been selected when the MONO indicator in the display section is lit.

**Auto stereo mode**
Normally, leave in this mode for reception. When a stereo FM broadcast is received, it will be automatically reproduced in stereo.

**Monaural mode**
When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise. In this case, however, FM stereo broadcasts will be reproduced in monaural sound.

***NOTE:***
*This button has no effect on reception of AM broadcasts.*

### ⑰ SELECT button
Press this button to switch to the station mode. Then you can turn the Multi-jog to select a station.
When in the Frequency mode, tuning the Multi-jog raises or lowers the frequency.
Serves as a button for forwarding to the left digit (◀) when inputting CD titles. (See page 27.)

### ⑱ GUI MODE button
Switches GUI MODE on and off.

### ⑲ Multi-jog
Use during tuner operation to select frequencies and station numbers. During GUI operation, use to move the on-screen cursor.
Serves as a jog for selecting characters when inputting CD titles. (See page 27.)

### ⑳ ENTER button
Press this button when you are in the frequency preset mode, and the displayed frequency is memorized in the selected station. (Station indications stop flashing and stay lit.)
When GUI is ON, press to execute an operation selected with the multi-jog ⑲.
Use this button when you input a title of CD as well. (See page 27.)

### ㉑ MEMORY button
Press this button to switch to the frequency preset mode. (When GUI is ON, it does not operate.)
Serves as a button for forwarding to the right digit (▶) when inputting CD titles. (See page 27.)

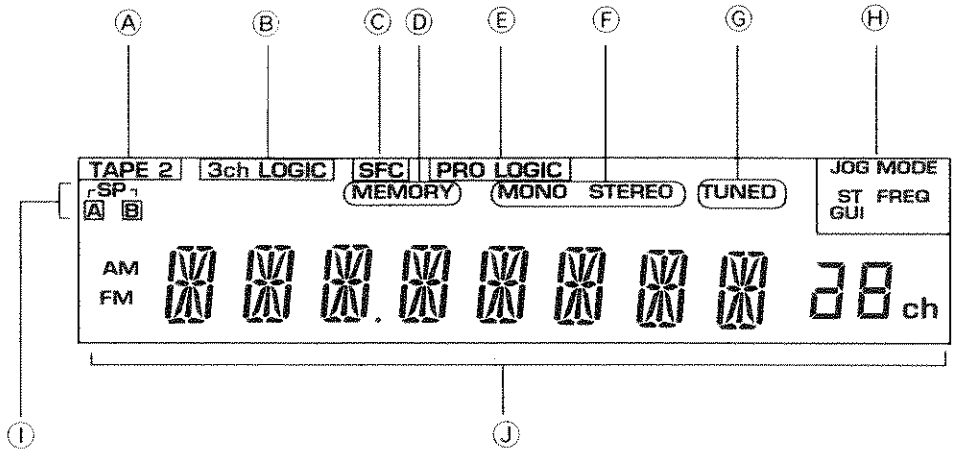
### ㉒ BASS control
Use to adjust the low-frequency level. Turn clockwise to boost bass, and counterclockwise to attenuate bass.

### ㉓ TREBLE control
Use to adjust the high-frequency level. Turn clockwise to boost treble, and counterclockwise to attenuate treble.

### ㉔ BALANCE control
Use to adjust the sound volume balance between left and right speakers.
**L** :Decreases the sound on the right side.
**R** :Decreases the sound on the left side.
Usually, left and right volume levels should be the same.

* Setting is memorized separately for each input selector button.

## DISPLAY SECTION




### Ⓐ TAPE 2 indicator
Lights up when the input selector is set to TAPE 2 MONITOR ON.

### Ⓑ DOLBY 3CH LOGIC indicator

### Ⓒ SFC indicator
This lights when an SFC mode (STUDIO, SIMULATED SURROUND, ARENA) is selected.

### Ⓓ MEMORY indicator

### Ⓔ DOLBY PRO LOGIC indicator

### Ⓕ MONO/STEREO indicator
**MONO** :Lights up when the FM MONO mode is selected with the MPX MODE button.
**STEREO** :Lights up when a stereo FM broadcast is being received.

### Ⓖ TUNED indicator
Lights up when a station is tuned.

### Ⓗ JOG MODE indicators
When operating the TUNER with the multi-jog, these indicate the station mode (ST) or the frequency mode (FREQ).
Also, when GUI is ON, "GUI" lights.

### Ⓘ SP (SPEAKERS) A, B indicators
Shows which speaker system (or systems) are switched on.

### Ⓙ Character display

# OPERATING THE TUNER

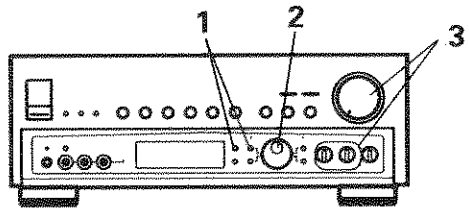
Press the POWER switch to the ON position.
Select TUNER with the input selector.
Be sure to turn the TAPE 2 MONITOR button OFF when listening to AM or FM broadcasts.
Switch ON the SPEAKERS button corresponding to the speakers you wish to use.

**FM auto stereo reception and monaural reception**
Each time you press the MPX MODE button, the MONO indicator in the display section lights or goes out.

- If an FM stereo broadcast is received when the MONO indicator is out, the STEREO indicator lights, and sound is in stereo.
- If an FM stereo broadcast is received when the MONO indicator is lit, the sound will be monaural. If there is interference during stereo mode reception, switch to mono. The sound will become monaural but interference will be reduced.

# TUNING INTO STATIONS

Turn the multi-jog, and the tuning frequency changes. (Switch off when the GUI MODE button is on.)
Turning in a clockwise direction raises the frequency, while turning in a counter-clockwise direction lowers the frequency.

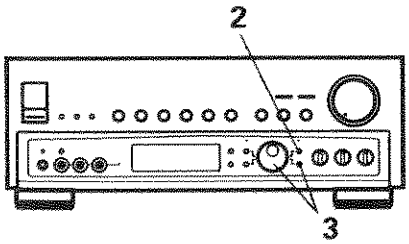



1. **Use the FM/AM button to select either FM or AM.**
   Confirm that the JOG MODE indicator in the display shows "FREQ".
   If "ST" is displayed, press the SELECT button to switch to "FREQ".
2. **Turn the multi-jog until you reach the frequency of a desired station.**
   When a stations is received, the TUNED indicator will light up.
   ***NOTE:***
   *The TUNED indicator may not light with broadcasts received over long distances, or when the broadcast signals are extremely weak.*
3. **Adjust the volume and tone as desired.**

**Auto tuning**
Auto tuning is convenient when you do not remember the frequency of a desired station, or when you wish to find stations that you do not normally listen to. Operate by remote control. (Refer to page 23.)
You can also perform Auto tuning GUI. (See page 25.)

# PRESET TUNING

## FREQUENCY PRESETTING

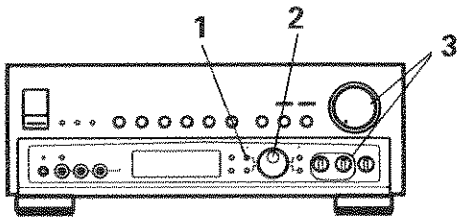



Switch off when the GUI MODE button is on.

1. **Tune into the desired station.**
   See the section "TUNING INTO STATIONS". In addition to station frequencies, the MPX MODE (auto stereo mode or monaural mode) can also be preset (FM only).
2. **Press the MEMORY button.**
   The station (channel) number flashes in the display. (Memory mode)
3. **Turn the multi-jog to select the station (channel) you want to memorize, and press the ENTER button.**
   - The station (channel) number lights in the display, indicating that it has been memorized.
   - If you do not press the ENTER button within about five seconds after selecting a station, the memory mode is canceled.
4. **Repeat steps 1 to 3 to preset additional stations.**
   A total of 30 AM and FM stations may be preset. When you store a new preset, it takes the place of the previously stored station (if any).

You can also preset using GUI. (See page 25.)

## LISTENING TO BROADCASTS USING PRESET TUNING




Switch off when the GUI MODE button is on.

1. **Press the SELECT button.**
   The "ST" of the JOG MODE's indicator lights in the display, and the mode switches to station call.
2. **Turn the multi-jog to select a station.**
3. **Adjust the volume and tone as desired.**

*NOTE:*
*Even if the receiver power cord is unplugged, data remains in memory for several days. If the contents of the memory are erased, preset one more.*

**Last station memory**
When the POWER switch is pressed to turn the power on, the last station received before the power was previously turned off will be turned in again. When the power is ON, if the FM/AM button is pressed, the last station received before the FM/AM button was previously pressed will be turned in again.

## RECEIVING FM SIMULCAST TV PROGRAMS

By combining a TV set with this receiver, you can receive FM simulcast TV programs (stereo TV sound transmitted from an FM radio station) while viewing the video portion on your TV.

1. **Select the desired TV program with the TV set.**
2. **Tune in the desired FM simulcast TV program on the receiver.**
3. **Adjust the volume and tone controls as desired.**

## OPERATING THE AUDIO/VIDEO COMPONENTS

Press the power switch to the ON position, and turn on the power to the other components you wish to use (for example, TV, VCR, cassette deck, etc.).

## PLAYBACK

1. **Use the input selector buttons to select the desired program source.**

| Program Source | Input selector |
|---|---|
| To play back on a VCR connected to the VCR/TAPE 1 jacks, or to play back on a cassette deck | VCR/TAPE 1 |
| To watch the TV picture from a TV (Digital satellite system) tuner connected to the SAT/TV jacks | SAT/TV |
| To listen to records | PHONO |
| To watch a LaserDisc or a digital video disc | LD/DVD |
| To listen to compact discs | CD |
| To watch a VCR connected to VIDEO INPUT jacks of front panel. | VIDEO INPUT |
| To listen to a tape on the cassette deck connected to TAPE 2 MONITOR jacks | TAPE 2 MONITOR |

* If you select a music source other than TAPE 2, switch OFF the TAPE 2 MONITOR.

2. **Operate the appropriate audio/video component to playback the program source.**
   For a video source, switch the TV connected to this unit to the video input mode.
3. **Adjust the volume and tone controls as desired.**
   - Refer to pages 5, 6 and 19 for details concerning surround operation.

# RECORDING WITH A CASSETTE DECK

## RECORDING WITH VCR/TAPE 1

If the TAPE 2 MONITOR button is ON, press to turn OFF.

1. **Select the source you want to record from with the input selector buttons.**
   When recording AM or FM broadcasts, select a preset station using the multi-jog. If the desired station has not been preset, tune in the station.
2. **Start recording on the cassette deck.**
3. **Play the desired program source (record, compact disc, etc.).**
   The volume, balance, and tone controls have no effect on the recording.

## RECORDING WITH TAPE 2

1. **Select the source you want to record from with the input selector buttons.**
2. **Start recording on the TAPE 2 cassette deck.**
3. **Play the desired program source (record, compact disc, etc.).**
   The volume, balance, and tone controls have no effect on the recording.

When copying a tape, play back on the VCR/TAPE 1 cassette deck, and record on the TAPE 2 cassette deck.

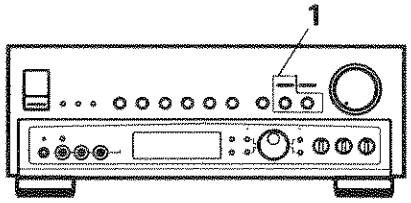
**Tape monitoring**
When recording is performed on a cassette deck equipped with a monitoring function, the recorded sound can be monitored through the speaker system by pressing the TAPE 2 MONITOR button to ON.

# VIDEO RECORDING

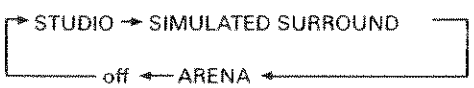
1. **Select the source you want to record from with the input selector buttons.**
   - When recording from a LaserDisc or a digital video disc to VCR→LD/DVD
   - When recording from the TV (Digital satellite system) tuner to VCR→SAT/TV
2. **Start recording on the VCR.**
   For VCR, select a line input (external input).
3. **Start playback on the component selected with the input selector.**
   The volume, balance, and tone controls have no effect on the recording.

You can easily perform LD/DVD-to-VCR dubbing using GUI. (LD/DVD COPY OPERATION P. 28)

# SURROUND EFFECT AND DOLBY 3CH LOGIC




1. **Select the desired mode with the DOLBY PRO LOGIC button, SFC MODE button, and DOLBY 3CH LOGIC button.**
   The SFC MODE changes in sequence each time the SFC MODE button is pressed. (The SFC indicator lights.)



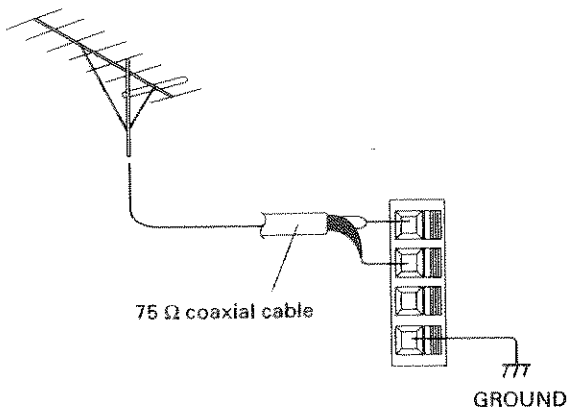

2. **Adjust levels to achieve a correct surround sound reproduction.**
   This is done using GUI (page 24). For details concerning how to perform level adjustment, refer to page 29.

# HINTS FOR BETTER RECEPTION

## EXTERNAL FM ANTENNA

The main advantage of FM over AM is the quality of the broadcast signal. In order to benefit fully from the high signal quality of FM broadcasts, it is recommended that a special-purpose FM antenna be installed. In weak signal areas, a multi-element (3-element, 5-element, 7-element) antenna should be used.

**Connecting the 75 Ω coaxial cable**




## GROUNDING

Grounding is recommended if reception of FM programs is impaired by noise. To ground, connect a thick polyvinyl-insulated wire to the GND terminal and attach the other end to a metal water pipe or grounding bar or wind it around a copper plate and bury it.

***NOTE:***

*Never connect a wire to a gas pipe for grounding since sparks may ignite the gas.*

## EXTERNAL AM ANTENNA

If it is not possible to obtain adequate AM reception even by changing the orientation of the AM loop antenna, a separate indoor antenna or an outdoor antenna should be installed.

### INDOOR AM ANTENNA

Use a vinyl-insulated wire 5 to 6 meters long (15 to 18 feet) and connect one end to the AM antenna terminal and affix the other end to the wall or ceiling, as high as possible.

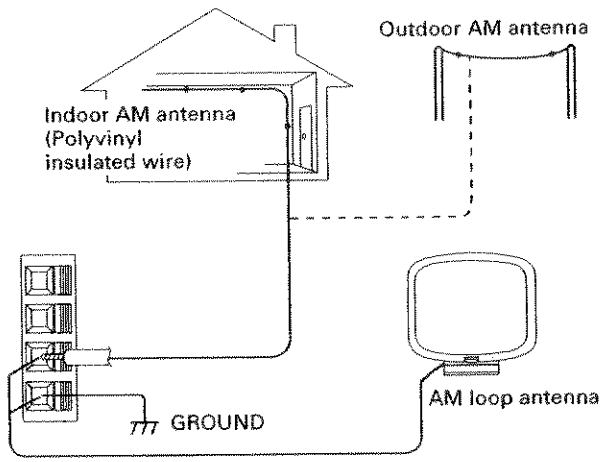
### OUTDOOR AM ANTENNA

If reception quality is not improved sufficiently even when an indoor antenna is used, a vinyl-insulated wire should be installed outside and fixed in place.

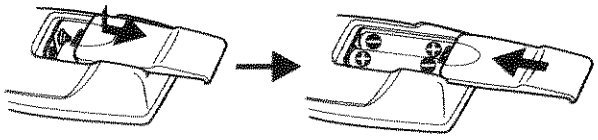
***NOTE:***

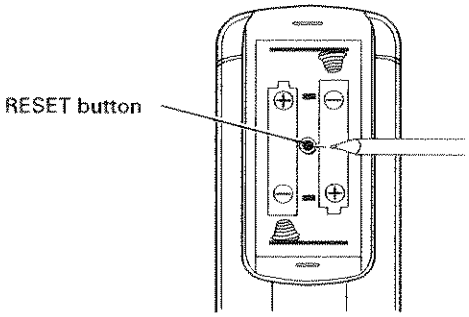
*Do not detach the AM loop antenna when using an indoor or an outdoor AM antenna.*

**AM antenna connection**



## PUTTING BATTERIES INTO THE REMOTE CONTROL UNIT






1. **Open the battery compartment cover on the rear of the remote control unit. The cover should open easily if you slide it in the direction of the arrow while pressing on it with your thumb.**
2. **Press the RESET button of the battery compartment using the tip of a mechanical pencil.**
3. **Take out the two supplied batteries size (AA/R6P), and insert them into the battery compartment in accordance with the indications in the compartment.**
4. **Close the cover of the battery compartment.**

**Incorrect use of batteries may lead to leakage or rupture. Always be sure to follow these guidelines:**

**A.**

Always insert batteries into the battery compartment correctly matching the positive (+) and negative (–) polarities, as indicated inside the compartment.

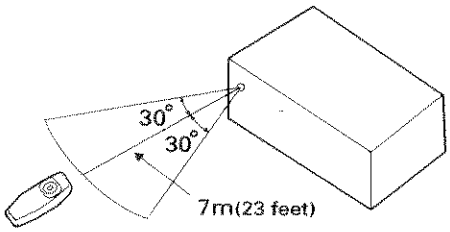
**B.**

Never mix new and used batteries.

**C.**

Batteries of the same size may have different voltages, depending on their type. Do not mix different types of batteries.

## REMOTE CONTROL RANGE

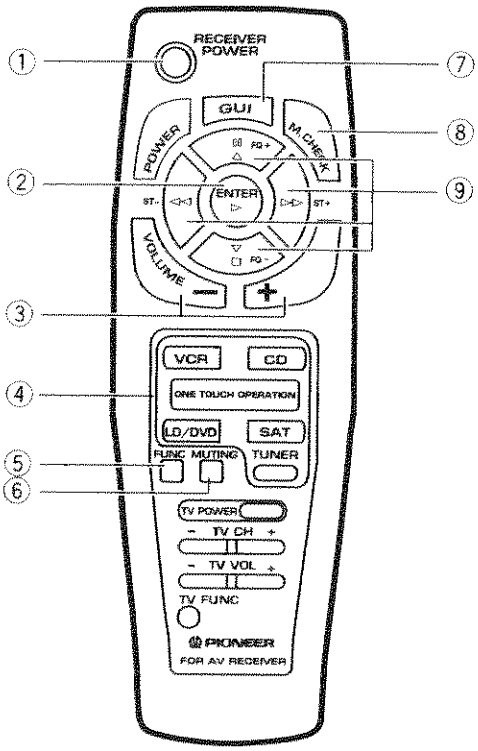



When operating the remote control unit, point the front of the unit at the front panel of the receiver. The remote control unit may be used within a range of about 7 meters (23 feet) from the remote sensor, within angles of up to about 30 degrees.
Performance of the remote control unit is adversely affected in the presence of a strong fluorescent light. Keep such lights away, especially from the sensor window.

**Battery Replacement**

As battery power runs down, the range over which the remote control unit can operate decreases. Also, ONE TOUCH OPERATION and other buttons light less brightly. When the range becomes too short, change the batteries.

## RECEIVER CONTROL BUTTONS




### ① RECEIVER POWER button

Switches the receiver power between ON and STANDBY.

### ② ENTER button

When GUI is ON, press to execute an operation selected with the Select/Adjust buttons.
When the GUI mode is OFF, use to operate other components.

### ③ VOLUME +, – buttons

Adjusts the overall volume.

### ④ ONE TOUCH OPERATION buttons

**VCR, CD, LD/DVD, SAT, TUNER:**

Pressing these buttons automatically calls up "ONE TOUCH OPERATION SET UP" settings, made using GUI. (P. 32)

Also, if power to this unit is OFF, it is switched ON, and operation automatically switches to the selected function.
When you press any of the ONE TOUCH OPERATION buttons, the GUI MODE becomes off.

### ⑤ FUNC. (function) button

Press to select the receiver input.

VCR/TAPE 1 → SAT → PHONO → TUNER → VIDEO ← CD ← LD/DVD ←

### ⑥ MUTING button

Used to temporarily mute the sound. When it's in the on position, the "– MUTING –" indicator appears on the display. The volume is restored when pressed again.

### ⑦ GUI button

Switches GUI MODE on and off.
When the GUI mode is ON, the Select/Adjust button ⑨ (△, ▷, ▽, ◁) lights.

### ⑧ M. CHECK (Mode check) button

Indicates whether the GUI MODE is on or off.
When it is on, △, ▷, ▽, ◁ light. When it is off, a ④ ONE TOUCH OPERATION button lights to indicate current function excluding TUNER.
When pressed while lit, the ONE TOUCH OPERATION buttons light up in order, and the component to be remote controlled can be selected without having to change the input of this unit.

### ⑨ Select/Adjust buttons (△, ▷, ▽, ◁)

When the GUI mode is ON, △, ▷, ▽, and ◁ light.
When using the GUI function with the on-screen display, use for such operations as selection and adjustments (by moving the cursor).
When the GUI mode is OFF, use to operate other components.

## OPERATING OTHER COMPONENTS

### REMOTE CONTROLLING OF ANY OTHER OF YOUR AUDIO-VISUAL COMPONENTS VIA THIS UNIT REQUIRES:

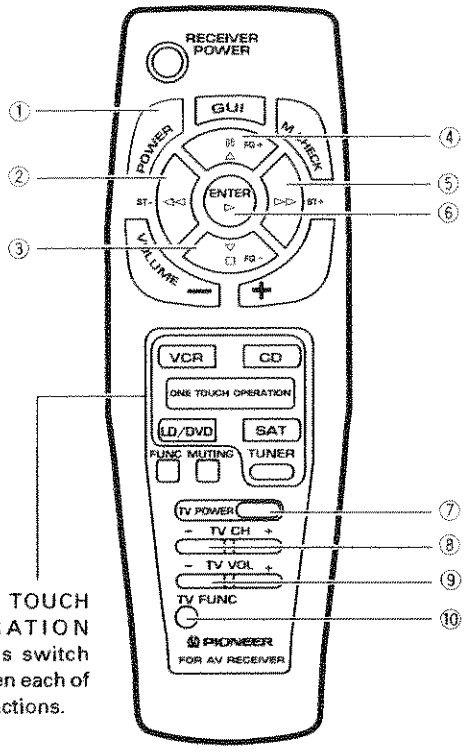
All components must be remote controllable (have a sensor window on the front panel) to receive a direct command from this unit, upon successful learning of those commands by this programmable unit.

**When operating components other than the receiver:**

1. **Press the ONE TOUCH OPERATION button for the component you want to operate.**
2. **Press the operation button.**

***NOTE:***

*Components that could not originally be operated by remote control cannot be controlled by this unit's remote control.*




ONE TOUCH OPERATION buttons switch between each of the functions.

## TV operation

The operation of TV or CATV is possible.

⑦ **TV POWER button:**
Switches the power of the TV ON/OFF.
Turn the CATV power ON/OFF when you select CATV.

⑧ **TV CH (channel) +, – button:**
Switches TV channels in order.
Switches CATV channels when you select CATV.

⑨ **TV VOL (volume) +, – button:**
Raises (+) and lowers (–) the volume.
It does function when you select CATV.

⑩ **TV FUNC (function) button:**
Used to change the TV FUNCTION.
TV FUNC button cannot be used with some PIONEER TVs.
It does function when you select CATV.

## VCR operation

① **POWER button:**
Switches VCR power ON/OFF.

② **◄◄ (REW) button:**
Rewinds the tape and allows picture search.

③ **■ (STOP) button:**
Stops the tape transport.

④ **II (PAUSE/STILL) button:**
Sets pause and still picture.

⑤ **►► (FF) button:**
Rapidly advances the tape and allows picture search.

⑥ **► (PLAY) button:**
Selects playback.

## LD or DVD player operation

① **POWER button:**
Switches LD or DVD player power ON/OFF.

② **◄◄ (SCAN) button:**
Pressing quickly once takes you to the start of the chapter currently playing. Each time you press it, you move back to the start of the previous chapter. Continue pressing to rewind.

③ **■ (STOP) button:**
Playback is stopped when pressed once.
With some LD players, pressing the button twice may open the disc tray.

④ **II (PAUSE) button:**
Video and audio are stopped and playback is paused.

⑤ **►► (SCAN) button:**
Pressing quickly once takes you to the start of the next chapter. Each time you press it, you move ahead to the start of the next chapter. Continue pressing for fast forward.

⑥ **► (PLAY) button:**
Selects playback.

## CD player operation

① **POWER button:**
Switches CD player power ON/OFF.

② **◄◄ (MANUAL SEARCH) button:**
Pressing quickly once takes you to the start of the track currently playing. Each time you press it, you move back to the start of the previous track. Continue pressing for reverse search.
Pressing the ◄◄ button while pressing the ■ button takes you to the previous disc. (With a file-type CD player)

③ **■ (STOP) button:**
Stops playback.

④ **II (PAUSE) button:**
Pauses playback.

⑤ **►► (MANUAL SEARCH) button:**
Pressing quickly once takes you to the start of the next track. Each time you press it, you move ahead to the start of the next track. Continue pressing for forward search.
Pressing the ►► button while pressing the ■ button takes you to the next disc. (With a file-type CD player)

⑥ **► (PLAY) button:**
Selects playback.

## SAT operation

The operation of SAT or Pioneer projection TV is possible.
Refer to "LD or DVD player operation" on this page when you select Pioneer DVD.

① **POWER button:**
Switches TV (Digital satellite system) tuner power ON/OFF.

②, ③, ④, ⑤ **◄, ▼, ▲, ► button:**
Function as Digital satellite system mode selection buttons. (Correspond to Digital satellite system cursor buttons.)
UP/DOWN of the menu is possible using ▲ and ▼ buttons when you select Pioneer projection TV.

⑥ **► (ENTER) button:**
Press to finalize the Digital satellite system mode.

## TUNER operation

② **ST – (Station Down) button:**
Used for recalling memorized stations.

③ **FQ – (Frequency Down) button:**
Shifts the frequency down.

④ **FQ + (Frequency Up) button:**
Shifts the frequency up.

⑤ **ST + (Station Up) button:**
Used for recalling memorized stations.

⑥ **Band button:**
Switches the FM and AM bands is turn.

**Auto tuning:**
Press FQ + (up) or – (down) button until the frequency starts to change, then release it. The tuner will automatically search for a broadcasting station and stops when one is found, and the TUNED indicator lights up. To search for another station, press again.

**Manual tuning:**
Press FQ + (up) or – (down) button and release quickly. The tuning frequency will change by one step each time the button is pressed. Press as many times as necessary to tune in the desired station. The TUNED indicator lights up when the station is tuned in best.

**High speed manual tuning:**
If you keep the FQ (up/down) button depressed after the frequency has begun to change, the reception frequency changes continuously, and stops when the button is released.

***NOTE:***
*When AUTO TUNING is in use, reception may not be possible over long distances or when signals are weak. At these times MANUAL TUNING is recommended.*

## GUI

GUI (Graphic User Interface) lets you use the TV screen to operate the system.

- Press the GUI MODE button on this unit or the GUI button on the remote control, and operation indications for the currently selected function are displayed on the TV screen.
- To operate, use the △, ▽, ▷, ◁ buttons on the remote control (they light up when the GUI mode in ON) or the multi-jog on this unit to move the cursor (the hand shaped mark) displayed on the TV screen. When the cursor is on the button you want to operate, press ENTER button.
- When the operating instructions say "Press the button", this means move the cursor to the desired button and press the ENTER button.

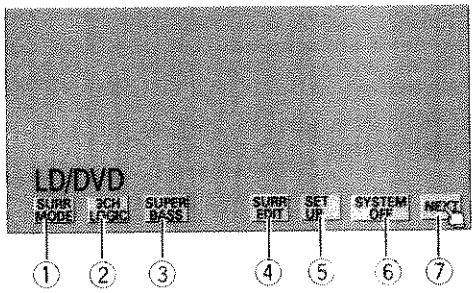
***NOTE:***

*If you do not perform any of the operations above within 10 ~ 30 seconds, the GUI display is canceled.*

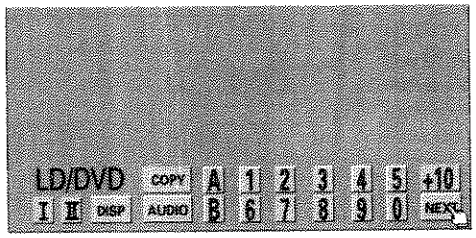
## RECEIVER CONTROL BUTTONS

- The buttons in the following explanation are the receiver operation button indications common to all function displays. (The illustration shows LD operation indications.)

(Figure 1: Main Menu display)



(Figure 2: Sub Menu display)




### ① SURR MODE (Surround Mode):

Switches between the three SFC modes and the DOLBY PRO LOGIC mode as follows.

DOLBY PRO LOGIC SURROUND → STUDIO → SIMULATED SURROUND → ARENA → OFF

The selected mode is displayed on the right of the function indications.

### ② 3CH LOGIC:

Switches DOLBY 3CH LOGIC ON/OFF.
When ON, "3CH LOGIC" is displayed on the right of the function indications.

### ③ SUPER BASS:

Switches SUPER BASS ON/OFF.
When ON, "SUPER BASS" is displayed on the right of the function indications.

### ④ SURR EDIT (Surround Edit):

Press to make adjustments such as level setting for the currently selected surround mode or DOLBY 3CH LOGIC.
When you press this button, the display changes to SURROUND EDIT indications.

***NOTE:***

*You cannot press this button when the surround mode or DOLBY 3CH LOGIC is OFF.*

### ⑤ SET UP:

Press this button and the display changes to the SET UP MENU. (See pages 30, 31)

### ⑥ SYSTEM OFF

Switches power to this unit, the TV, and the currently selected function OFF.

***NOTE:***

*When you press the SYSTEM OFF button, power to components not made by Pioneer switches ON if power to these components was already switched OFF.*

### ⑦ NEXT button:

Switches between Main Menu display (Figure 1) and Sub Menu display (Figure 2).

**Calling up the tuner display.**

1. **Press the TUNER button of the input selector.**
2. **Press the GUI MODE button on this unit or the GUI button on the remote control.**
   TUNER operation indications are displayed.

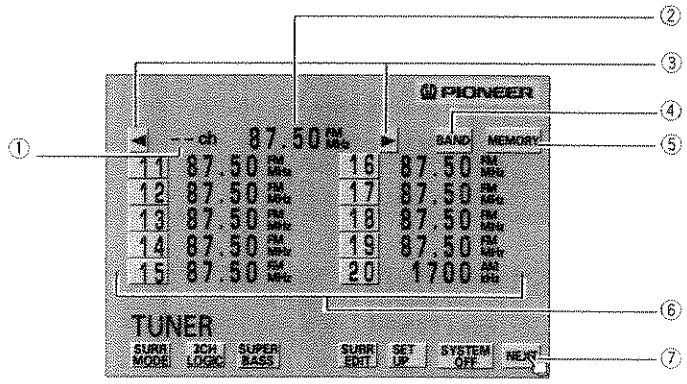



Illustration shows U.S. and Canadian models.

① **Channel indication:**
Indicates the current channel.

② **Frequency indication:**
Indicates the current frequency.

③ **◄, ► buttons:**
Use to raise or lower the frequency.

④ **BAND button:**
Switches between FM/AM. The band changes each time you press this button, and is displayed next to the frequency indication.

⑤ **MEMORY button:**
Use to memorize stations.
You can only press this button when a channel list is displayed.

⑥ **Channel list:**
Frequencies memorized in each channel are displayed. Press a number button, and that channel's frequency is received.

⑦ **NEXT button:**
Switches between channel lists. There are a total of thirty channels, from 1 to 30, displayed 10 at a time on three lists which change each time you press the button as follows.

1-10 → 11-20 → 21-30 →

## MANUAL/AUTO TUNING

1. **Move the cursor to BAND, and select FM or AM.**
   The band changes each time you press the ENTER button.
2. **Move the cursor to ► or ◄, and press the ENTER button to raise or lower the frequency as desired.**

**● One Step Tuning:**
Press the ENTER button and release quickly. The frequency will change by one step each time the button is pressed. Press as many times as necessary to tune in the desired station.

**● Auto Tuning :**
Press the ENTER button until the frequency starts to change (about 1 sec.), then release it. The tuner automatically searches for a broadcasting station and stops when one is found.

***NOTE:***
*When the signal level is too weak for reception, the unit cannot perform Auto tuning. In this case, change to Manual tuning.*

**● High Speed Manual Tuning:**
Keep the ENTER button pressed. The frequency changes continuously, and stops when the button is released.

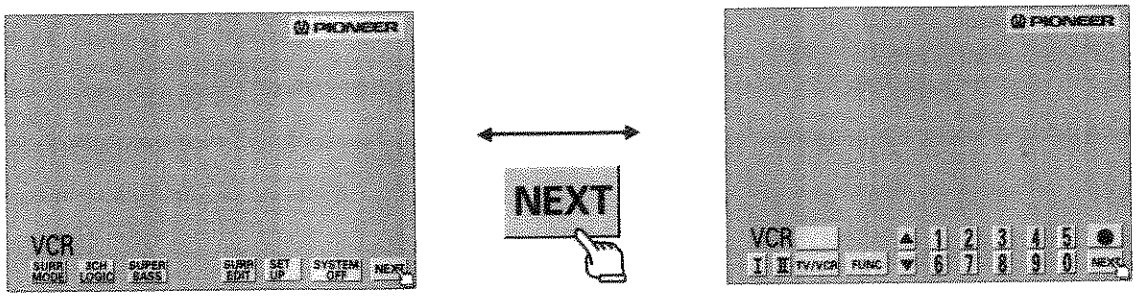
## PRESET TUNING

You can preset up to 30 FM/AM stations for easy recall.

### FREQUENCY PRESETTING

1. **Press NEXT to switch to the desired channel list.**
   (1-10, 11-20 or 21-30)
2. **Tune in the desired station.**
   Refer to "MANUAL/AUTO TUNING" procedure.
   In addition to station frequencies, the MPX MODE can also be preset (FM only).
   Switch to the MPX MODE using the MPX MODE button on this unit. (No indications are displayed.)
3. **Press the MEMORY button.**
   Channel indications flash.
4. **Select the channel you want to memorize from the channel list.**
   This memorizes the frequency.
   To memorize other stations, repeat steps 2 through 4 or 1 through 4.

## <VCR>




**I / II** :Using the REMOTE SET UP learning function (P. 31), use memorize commands.

**TV /VCR** :This button can be used only for VCRs with a TV/VCR selector.
Toggles the antenna output between TV and VCR.

**FUNC** :Switches the input selector functions.

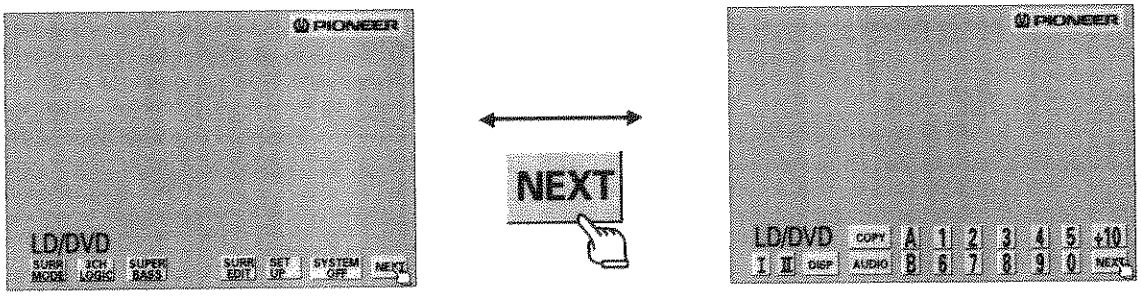
**▲** :Shifts channels in ascending order.

**▼** :Shifts channels in descending order.

**0~9** :Use to call up channels.

**●** :Selects the recording mode.

## <LD/DVD>




**I / II** :Using the REMOTE SET UP learning function (P. 31), use to memorize commands.

**DISP** :Switches TV screen display of chapter, frame/time number ON/OFF.

**COPY** :Press to record a laser disc or DVD on your VCR. When you press this button, the display changes to COPY indications. (This button is displayed only when the function is LD/DVD.)

**AUDIO** :Switches sound of LD or DVD.

**A** :Selects playback of LD disc to side A.

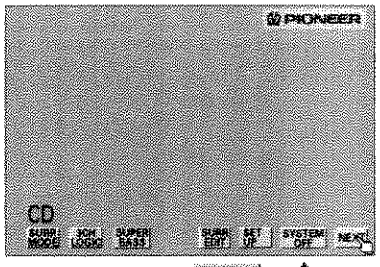
**B** :Selects playback of LD disc to side B.

**0~9** :For direct selection of a chapter.

**+10** :Use to input such information as chapter numbers higher than 10.

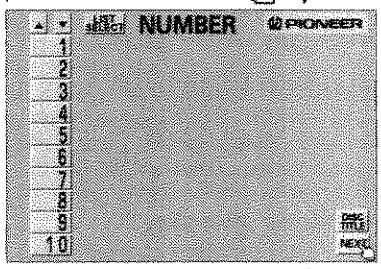
## <CD>

- Registers up to 100 CD disc titles. Use to manage discs together with file type CD players.
- Registered disc titles can be list-displayed in groups of 10 titles numerically (1 to 100) or list-displayed alphabetically.



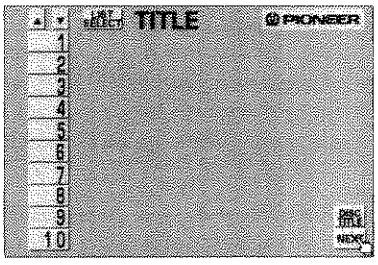

NEXT

<Title list by disc number>

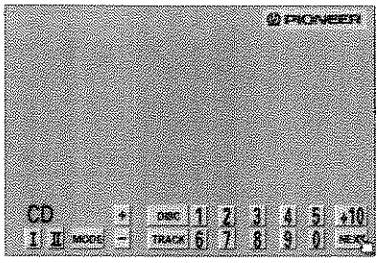



LIST SELECT

<Title list by alphabetical order>




NEXT




**DISC TITLE**
:Press to register disc titles.

**LIST SELECT**
:Each press sets "Title list by disc number" or "Title list by alphabetical order".

**▲, ▼** :Changes the disc number list page.

**I / II** :Using the REMOTE SET UP learning function (P. 31), use memorize commands.

**MODE** :Use this button to switch between SINGLE and ALL modes when using a file-type CD player.
To play only a single disc select SINGLE.
For search and continuous play of all discs select ALL.

**+** :Use to select a disc number.

**–** :Use to select a disc of the file-type CD player.

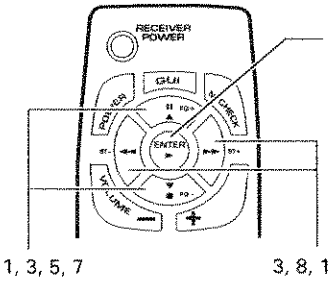
**DISC** :Before selecting a disc number button, select this button first.

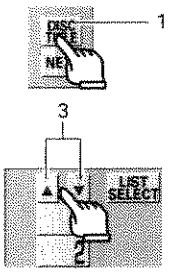
**TRACK** :Before selecting a track number button, select this button first.

**0~9** :For direct selection of a track or programming of tracks. Use when selecting a disc number as well.

**+10** :Use when selecting a track number higher than 10.
For example, to select 21, press the +10 button twice and then the 1 button.
Use when selecting a disc number as well.
This button cannot be used with some CD players.

## To store the DISC TITLE into this unit



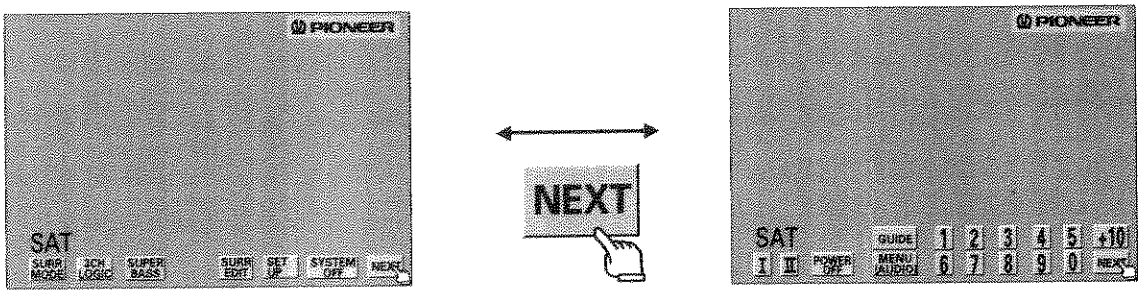

- Up to 16 characters can be input.
  English characters: A-Z
  Numerals: 1-9, 0
  Symbols: ?, +, –, ', /, !,&, ␣ (space) (8 characters)

1. **Move the cursor to the DISC TITLE button.**
2. **Press the ENTER (►) button.**
3. **Move the cursor to the ▲ or ▼ buttons on the display.**
4. **Press the ENTER (►) button and select the desired disc number list page.**
   Each time the button is pressed, the disc number list page changes as follows by 10 pages.
   ↱ 1-10 ↔ 11-20 ..... 81-90 ↔ 91-100 ↰
5. **Moves the cursor to the desired disc number using the ▲ or ▼ buttons of the remote control unit.**
6. **Press the ENTER (►) button. The selected disc number lights up at one line, and the first character is highlighted, indicating standby for input.**
7. **Select the desired character using the ▲ or ▼ button of the remote control unit.**
8. **Move the digit using the ► button of the remote control unit.**
   - Corrections can be made by moving back to the previous digit using the ◄ button.
9. **Repeat steps 7 to 8, and select the other digit characters.**
10. **Press the ENTER (►) button. The title of the selected disc number is registered.**
11. **Repeat steps 5 to 10 for the number of times desired, and input the title of other discs.**
12. **Move the cursor to the DISC TITLE button.**
13. **Press the ENTER (►) button.**

*NOTES:*

- *You can use Multi-jog, SELECT (◄), MEMORY (►) and ENTER buttons on the front panel for this operation.*
- *If you input the initial letter of an artist in advance, it will be easy to find an artist and all because the list is shown according to the initial letter in the "Title list by alphabetical order".*
- *If you use the Pioneer file type CD player, it starts to playback only by pressing the desired DISC number.*

## <SAT>




You can select SAT, Pioneer DVD or Pioneer projection TV.

I / II :Using the REMOTE SET UP learning function (P. 31), use memorize commands.

**When you select SAT**

POWER OFF
:Press to turn off the power of the TV (Digital satellite system) tuner.

GUIDE :Serves as the program guide button of the digital satellite system.

MENU(AUDIO)
:When using the TV (Digital satellite system) tuner, MENU serves as the button for calling the menu.

0~9 :Serves as the digit buttons of the TV (Digital satellite system) tuner.

**When you select Pioneer DVD**

POWER OFF
:Press to turn off the power of the DVD player.

MENU(AUDIO)
:Serves as the button for switching audio of the DVD.

0~9, +10 :Serves as the digit buttons of the DVD.

**When you select Pioneer projection TV**

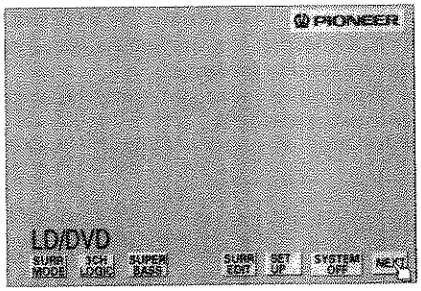
POWER OFF
:Press to turn off the power of the projection TV.

0~9 :Serves as the digit buttons.

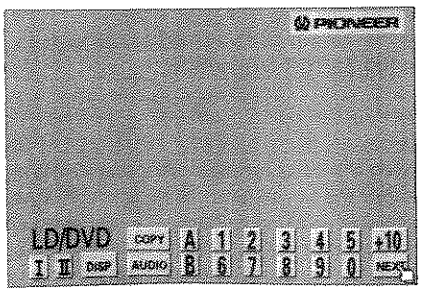
# LD/DVD COPY OPERATION (GUI OPERATION)

GUI operation enables easy dubbing of a laser disc or a digital video disc on your VCR.

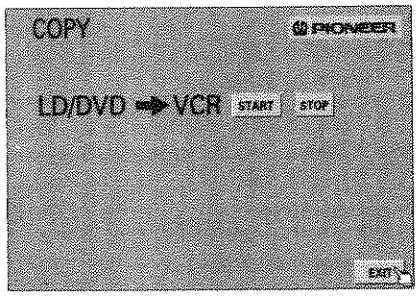
1. **Press the LD/DVD button.**




2. **Press the NEXT button.**



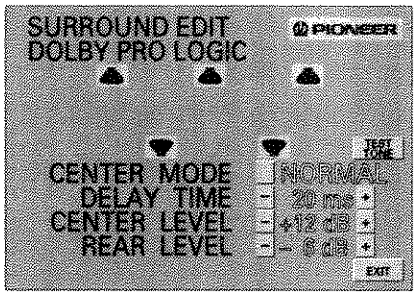

3. **Press the COPY button.**
COPY menu is displayed.




4. **Press START.**
Play begins on the LD or DVD player, and recording starts on the VCR. To stop, press the STOP button.

- If you press the SURR EDIT button on a function operation display, display switches to "SURROUND EDIT" indications for the currently selected surround mode. (Press the EXIT button to return to the original function operation display.)
- On the SURROUND EDIT display, you can adjust levels, switch to the center mode, and adjust delay time.

(When using DOLBY PRO LOGIC)




## LEVEL ADJUSTMENT

Example: When using DOLBY PRO LOGIC

1. **Press the CENTER MODE button to select the Center Mode. (Refer to page 6)** *1

   NORMAL → WIDE → PHANTOM

2. **Press the TEST TONE button to switch the test tone on.** The test tone is output from each of the speakers in the following order.

   Front Left → Center *2 → Front Right → Surround (Rear)

3. **Adjust so that the volume level is the same from each of the speakers.**
   - Use the CENTER LEVEL +, – buttons to adjust the center speaker volume level. *3
   - Use the REAR LEVEL +, – buttons to adjust the rear speakers volume level. *4
4. **Press the TEST TONE button to switch the test tone OFF.**

*NOTE:*

*1 You can select the CENTER MODE when using DOLBY PRO LOGIC SURROUND and DOLBY 3CH LOGIC.
When using DOLBY 3CH LOGIC, you can switch between NORMAL and WIDE settings.*

*2 When the CENTER MODE button is PHANTOM position, no test tone is output from the center speaker.*

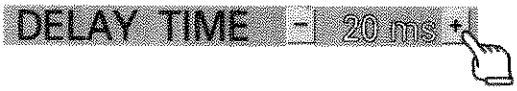
*3 Only when using DOLBY PRO LOGIC SURROUND and DOLBY 3CH LOGIC, can you adjust the CENTER LEVEL.*

*4 When using DOLBY 3CH LOGIC, the REAR speakers are not used.*

## SETTING THE DELAY TIME

You can only adjust delay time for DOLBY PRO LOGIC SURROUND, SIMULATED SURROUND and ARENA.
Each time you press the +, – buttons, delay time changes as follows:

15 ms ⟷ 20 ms ⟷ 25 ms ⟷ 30 ms




The standard setting is 20 ms, but you can select any setting of your choice.

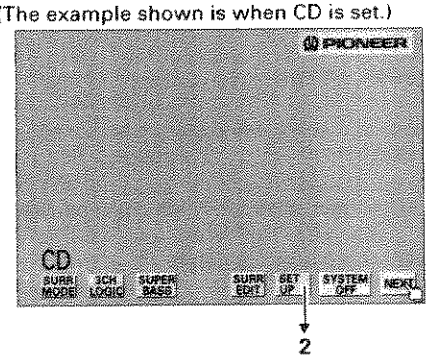
Even if your audio/video components are not made by Pioneer, performing the following procedure will enable you to operate them with this unit's remote control and GUI. (If you do not perform the following procedure, you will not be able to operate other manufacturers' components with this unit's remote control.)

When operating, be sure to connect an IR repeater. (P. 11)

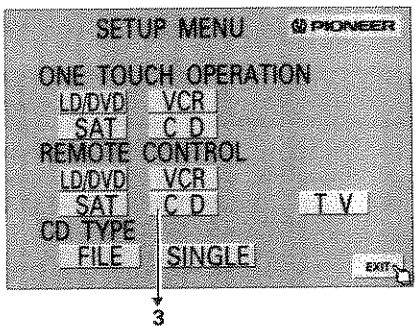
## Calling up and setting up presets

This unit is already preset with the remote control signals of other manufacturers' components. The following procedure shows you how to call up and set up these presets.

1. **Press the GUI button.**
   - The GUI MENU is displayed.
   - The menu differs according to the input set. (The example shown is when CD is set.)

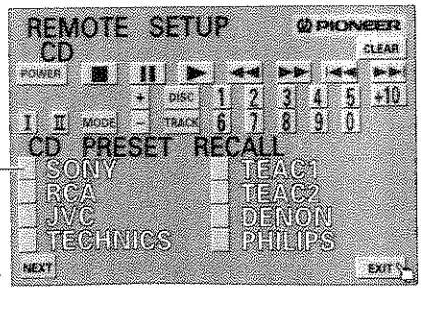



2. **Press the SET UP button.**
   The SET UP MENU is displayed.

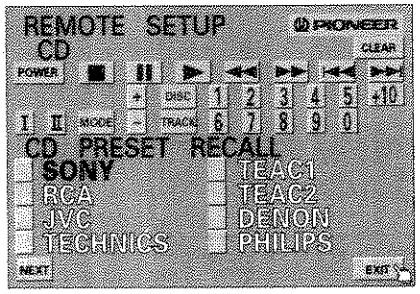



3. **Select one of the five REMOTE CONTROL functions.**
   The display switches to REMOTE SET UP indications. The name of preset manufacturers are indicated in gray in the lower half of the PRESET RECALL screen.
   - If more brand names (manufacturer name) have been preset than those displayed, press the NEXT button at the bottom left side of the screen to display the other brand names.

(Example: CD)




4. **Select the manufacturer of your component.**
   The selected manufacturer's name and preset operation buttons are indicated in black.
   This calls up the preset.
   - If the desired brand name is not displayed, use the "learning" function on page 31 to set it.
   - The buttons displayed in gray cannot be used in this condition (they can be used by performing the "learning" function on page 31.)
   - To return preset buttons to their original settings, press the CLEAR button. The original settings are Pioneer remote control commands.




5. **To finish remote set up operation, press the EXIT button.**

6. **When CD is selected, select the player type as well.**
   **FILE** : File type or magazine type CD players
   **SINGLE** : General or magazine type CD players

***NOTE:***
*Even if a brand name is specified, when several types of remote control signals are used for one brand's component or a special specification is used, some component may not be operated. If several signals are used, these can be selected by calling them "1" or "2". If no operations are still carried out, perform the "learning" function on page 31.*

**Other brand remote control signal preset in this unit.**

| LD/DVD | | | |
|---|---|---|---|
| LD | | DVD | |
| 1st page | SONY 1 | 2nd page | PIONEER |
| | SONY 2 | | |
| | KENWOOD | | |
| | PHILIPS | | |
| | PANASONIC 1 | | |
| | PANASONIC 2 | | |

| SAT | | | |
|---|---|---|---|
| SAT | | DVD&PJTV | |
| 1st page | RCA | 2nd page | PIONEER DVD |
| | SONY | | PIONEER PROJECTION TV |

| VCR | | | | | |
|---|---|---|---|---|---|
| VCR | | | | TAPE | |
| 1st page | RCA | 2nd page | MITSUBISHI | 3rd page | PIONEER |
| | SHARP | | SANYO | | SONY |
| | ZENITH | | GOLD STAR | | JVC |
| | SONY | | FISHER | | TECHNICS |
| | TOSHIBA | | MAGNABOX 1 | | KENWOOD |
| | HITACHI | | MAGNABOX 2 | | TEAC |
| | JVC | | | | |
| | PANASONIC | | | | |

| TV | | | | | |
|---|---|---|---|---|---|
| TV | | | | CATV | |
| 1st page | RCA | 2nd page | MITSUBISHI | 3rd page | PIONEER |
| | SHARP | | GOLD STAR | | JERROLD 1 |
| | ZENITH | | GE | | JERROLD 2 |
| | SONY | | MAGNABOX | | JERROLD 3 |
| | TOSHIBA | | | | JERROLD 4 |
| | HITACHI | | | | SA 1 |
| | PHILIPS | | | | SA 2 |
| | PANASONIC | | | | ZENITH |

| CD | | | |
|---|---|---|---|
| 1st page | SONY | 2nd page | ONKYO 1 |
| | RCA | | ONKYO 2 |
| | JVC | | KENWOOD 1 |
| | TECHNICS | | KENWOOD 2 |
| | TEAC 1 | | SANYO |
| | TEAC 2 | | YAMAHA |
| | DENON | | |
| | PHILIPS | | |

## Learning

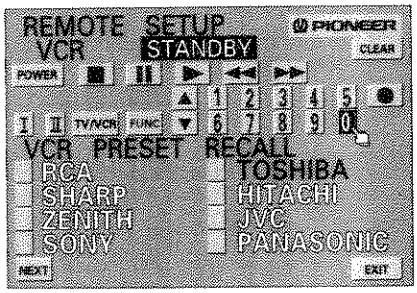
This function enables components of brands and functions not preset in this unit to be operated by receiving and learning the remote control signals of these components and outputting the same signals.

- Although the GUI menu is not displayed for TV, signals set using the buttons of the remote control unit can be transmitted.

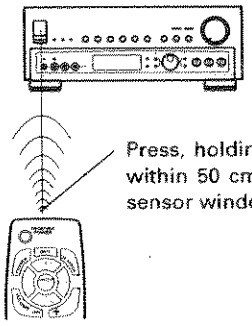
1. **Perform the first three steps of "Calling up and setting up presets" on page 30.**

2. **Select the gray button you want to use for learning and press.**
   The "STANDBY" indication flashes. (If you remain in STANDBY for about 1 minutes, it is canceled.)

(Example: Using the 0 buttons for learning)

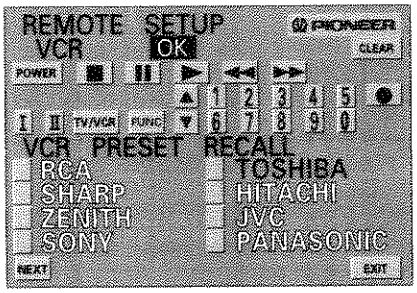



3. **Point your component's remote control at this unit's remote control unit's sensor window and press the selected button.**



Press, holding the remote control unit within 50 cm (20 inches) of this unit's sensor window.

- If "OK" is displayed, learning has been completed. If you want to use another button for learning, repeat steps 2 and 3.




- If "NG" is displayed, repeat steps 2 and 3.
- When you have completed learning, press the EXIT button.

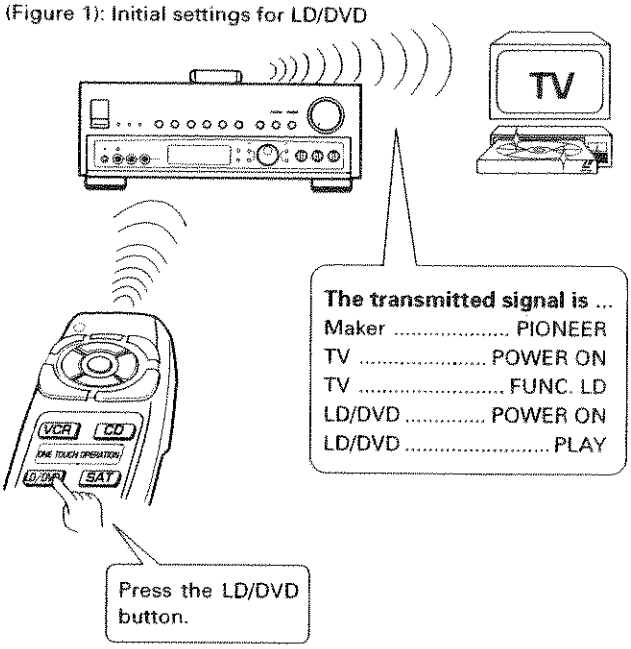
***NOTE:***

- *To return buttons you used for learning to their original settings, press the CLEAR button. This returns them to the original Pioneer remote control commands.*
- *There are no signals in buttons I and II so you can use them for learning.*
- *Even when OK is indicated during learning, operation may still not be possible. If this happens, repeat the learning procedure. With some manufacturer's components, learning may be difficult to perform. Learning may also not be possible if the remote control's batteries are run down. If this is the case, load the remote control with new batteries and repeat the learning procedure.*
- *Even black preset buttons can be used for learning other commands.*
- *Learning a command may not be possible if many commands requiring a large amount of memory have already been learned resulting in insufficient memory remaining.*

# ONE TOUCH OPERATION SET UP (GUI OPERATION) ISC Intelligent System Control

- Sets the operation signal that is transmitted when a remote control ONE TOUCH OPERATION button is pressed.
- Initially, Pioneer remote control signals are transmitted. (Figure 1)

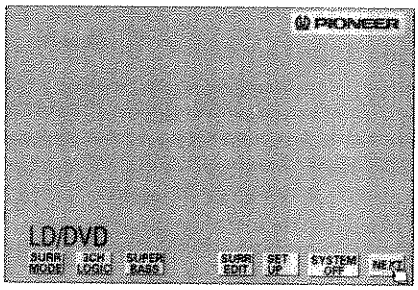
(Figure 1): Initial settings for LD/DVD



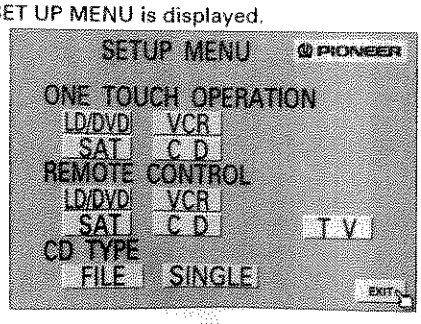

To operate other makers' components, first complete REMOTE SET UP procedures (P. 30).

Example: When you want to change LD/DVD ONE TOUCH OPERATION commands.

1. **Press the GUI button.**
   - The GUI MENU is displayed.
   - The menu differs according to the input set. (The example shown is when LD is set.)

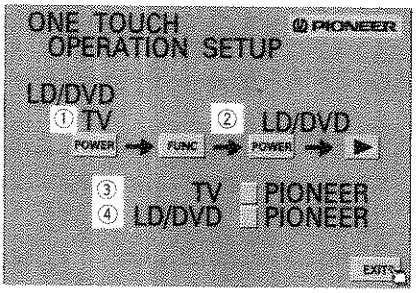



2. **Press the SET UP button.**
   The SET UP MENU is displayed.




3. **Select LD/DVD from the three ONE TOUCH OPERATION SET UP function buttons.**
   ONE TOUCH OPERATION SET UP indications are displayed.

(Example: LD)




①,②

: You can select which operation buttons will transmit operation signals and those which will not.
When the operation button's character is black, a signal will be transmitted. If it is gray, it will not be transmitted. The buttons's character color changes each time it is pressed.

- With other maker's components, if power is ON when the POWER signal is transmitted, power is switched OFF.
  When the TV "FUNC" signal is transmitted, the TV function may not become the function connected to the receiver.
  For this reason, when other makers' presets are called up with REMOTE SET UP, commands are not automatically transmitted.

③,④

: TV and LD/DVD maker settings are displayed.

- If you use REMOTE SET UP (P. 30) to call up another maker's presets, that maker's name is displayed.
- When you use the REMOTE SET UP learning function (P. 31), the "PIONEER" indication becomes gray.
  Remote control signals set with REMOTE SET UP are transmitted.
  To return to the original Pioneer remote control commands, press the ON/OFF button (on the left of "PIONEER") to turn the "PIONEER" indication black.
  (If the original settings are not Pioneer remote control commands, even Pioneer components may switch OFF when the POWER command is transmitted, or there may be some other incorrect operation.)

4. **After completing settings, press the EXIT button.**

***NOTE:***

*With original Pioneer remote control commands, the TV function always becomes "LD", so connect the receiver's VIDEO OUT (TO MONITOR TV) terminal to the TV's LD video input terminal.*

# TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

| Symptom | Cause | Remedy |
|---|---|---|
| **Power does not come on even when the POWER switch is pressed.** | • Power cord is disconnected.<br>• Instances are rare, but the problem may be due to the operation of the protector circuit. | • Connect cord securely.<br>• Unplug the power cord of the unit from the AC wall outlet, then plug it in again. |
| **Control is not possible regardless of what operation button is pressed.** | • Static electricity affects the unit when the air is dry, such as in winter. | • Unplug the power cord of the unit from the AC wall outlet, then plug it in again.<br>• Press the RESET button.<br>• If static electricity is pronounced, it is recommended that you operate the unit using the remote control unit. |
| **No sound is produced, even when the input selector button is selected.** | • Connections are incorrect. | • Consult pages 7-11 and perform connections correctly. |
| | • The MUTING button is pressed. | • Press the MUTING button to cancel the MUTING effect. |
| | • VOLUME is turned down. | • Raise volume. |
| | • Speaker connecting wires are disconnected from speaker terminals. | • Connect wires to terminals securely. |
| | • One or both of the input cords are disconnected. | • Connect input cords securely. |
| | • TAPE 2 MONITOR button is in the ON position. | • Press the button again to the OFF position. |
| | • The SPEAKERS button is OFF. | • Switch the SPEAKERS button ON. |
| **No picture is produced, even when the input selector button is selected.** | • Connection are incorrect. | • Consult pages 7-11 and perform connections correctly. |
| | • The VCR and the selected input selector button are not correct. | • Press the correct button. |
| **High noise level.** | • Station has not been tuned in to correct frequency. | • Tune the station in correctly. |
| | • Antenna has not been connected or has become disconnected. | • Connect the antenna securely. |
| | **FM reception**<br>• Accessory FM antenna remains bundled up or it is not pointing in right direction. | • Straighten out the antenna and point in the direction which provides optimum reception. |
| | • Weak broadcasting station signals. | • Replace accessory FM antenna with outdoor FM antenna. |
| | **AM reception**<br>• AM loop antenna is not pointing in right direction. | • Change the direction of the AM loop antenna and find a position where reception is improved. |
| | • Weak broadcasting station signals. | • Erect an outdoor AM antenna or connect a ground wire. |
| | • Noise is being picked up by this unit from other equipment (especially electrical appliances using motors or fluorescent lights). | • Turn off the appliances generating noise or remove them from the vicinity of the stereo equipment.<br>• Separate the antenna from the unit by some distance. |

| Symptom | Cause | Remedy |
|---|---|---|
| **No auto stop.** | ● Input signals are not strong enough. | ● (FM) If the supplied simple antenna is being used, change to an outdoor antenna. |
| **TV source cannot be seen when the VCR's TV tuner is used.** | ● TV antenna is not connected to the VCR, or connections are faulty. | ● Consult the VCR's operating instructions, and connect the antenna correctly. |
| | ● The VCR's input switch is set to line input. | ● Set the VCR's input switch to built-in tuner. |
| **No rear sound is produced.** | ● The SFC MODE switch is set incorrectly.<br>● The REAR LEVEL is turned down.<br>● Speaker connecting wires are disconnected from the REAR SPEAKERS terminals. | ● Set correctly.<br>● Refer to page 29 and adjust the rear level.<br>● Connect wires to the terminals securely. |
| **Remote control does not work.** | ● Batteries are dead or missing in remote control unit.<br>● Poor angle or too great a distance from the remote sensor window.<br>● There is an obstacle between you and the remote sensor window.<br>● A fluorescent light is shining on the remote sensor window. | ● Insert new batteries.<br>● Use within 7 meters (23 feet) and within a 30 degree angle of the remote sensor window.<br>● Change your position or move the obstacle.<br>● Move the receiver so fluorescent light does not shine directly on the receiver's front panel remote sensor window. |

*Abnormal functioning of this unit may be caused by static electricity or other external interference. To restore normal operation, turn the power off and then on again, or unplug the AC power cord and then plug it in again.*

# SPECIFICATIONS

### Amplifier Section

**Continuous average power output of 150 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.09 %** total harmonic distortion (front).**

[Multi-voltage model only]
Continuous Power Output (DIN)
Front (1 kHz, T.H.D. 1 %, 8 Ω) ..... 165 W + 165 W
[U.S. and Canadian models only]
Continuous Power Output
Front ..... 135 W + 135 W (1 kHz, 0.8 %, 8 Ω)
Center ..... 135 W (1 kHz, 0.8 %, 8 Ω)
Rear ..... 135 W (1 kHz, 0.8 %, 8 Ω)
Dynamic Power (2 Ω/4 Ω/8 Ω) ..... 350 W/280 W/180 W

[Round 2-pin AC plug model only]
Continuous Power Output
Front (1 kHz, T.H.D. 1 %, 4 Ω, DIN) ..... 120 W + 120 W
Front ..... 80 W + 80 W (1 kHz, 1 %, 4 Ω)
Center ..... 80 W (1 kHz, 1 %, 4 Ω)
Rear ..... 80 W (1 kHz, 1 %, 4 Ω)
Dynamic Power (2 Ω/ 4 Ω/ 8 Ω) ..... 180 W/ 150 W/ 110 W
Input (Sensitivity/Impedance)
PHONO MM ..... 2.8 mV/47 kΩ
SAT/TV, CD, VCR/TAPE 1, TAPE 2
LD/DVD, VIDEO ..... 200 mV/47 kΩ
Phono Overload Level (T.H.D. 0.1 %, 1kHz)
PHONO MM ..... 100 mV
Frequency Response
PHONO MM ..... 20 Hz to 20,000 Hz ± 0.3 dB
SAT/TV, CD, VCR/TAPE 1, TAPE 2
LD/DVD, VIDEO ..... 5 Hz to 100,000 Hz $^{+0}_{-3}$ dB
Output (Level/Impedance)
VCR/TAPE 1 REC, TAPE 2 REC ..... 200 mV/2.2 kΩ
Tone Control
BASS ..... ± 8 dB (150 Hz)
TREBLE ..... ± 8 dB (10 kHz)
SUPER BASS ..... + 8 dB (80 Hz)
Signal-to-Noise Ratio (IHF, short circuited, A network)
PHONO MM ..... 76 dB
SAT/TV, CD, VCR/TAPE 1, TAPE 2
LD/DVD, VIDEO ..... 97 dB
Signal-to-Noise Ratio [EIA, at 1 W (1kHz)]
PHONO MM ..... 77 dB
SAT/TV, CD, VCR/TAPE 1, TAPE 2
LD/DVD, VIDEO ..... 80 dB

* *Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers.*
** *Measured by Audio Spectrum Analyzer.*

### VIDEO Section

Input (Sensitivity/Impedance)
SAT/TV, VCR, LD/DVD, VIDEO ..... 1 Vp-p/75 Ω
Output (Level/Impedance)
VCR REC, MONITOR TV ..... 1 Vp-p/75 Ω
Frequency Response
SAT/TV, VCR, LD/DVD, VIDEO
→ MONITOR ..... 5 Hz to 7 MHz $^{+0}_{-3}$dB
Signal-to-Noise Ratio ..... 55 dB
Cross Talk ..... 55 dB
TV color system
Round 2-pin AC plug model ..... PAL
U.S. and Canadian models ..... NTSC
Multi-voltage model ..... PAL/NTSC (Switchable)

### FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono: 11.2 dBf, IHF (1.0 µV/75 Ω)
50 dB Quieting Sensitivity ..... Mono: 16.8 dBf
Stereo: 38.6 dBf
Signal-to-Noise Ratio ..... Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Distortion ..... Stereo: 0.5 % (1kHz)
Alternate Channel Selectivity ..... 60 dB (400 kHz)
Stereo Separation ..... 40 dB (1 kHz)
Frequency Response ..... 30 Hz to 15 kHz (± 1) dB
Antenna Input ..... 75 Ω unbalanced

### AM Tuner Section

Frequency Range ..... 531 kHz to 1,602 kHz (9 kHz step)
530 kHz to 1,700 kHz (10 kHz step)
Sensitivity (IHF, Loop antenna) ..... 350 µV/m
Selectivity ..... 25 dB
Signal-to-Noise Ratio ..... 50 dB
Antenna ..... Loop antenna

### Miscellaneous

Power Requirements
Round 2-pin AC plug model ..... AC 220-230 V, 50/60 Hz
U.S. and Canadian models ..... AC 120 V, 60 Hz
Multi-voltage model ..... AC 110 V/120-127 V/220 V/240 V (Switchable), 50/60 Hz
Power Consumption
Round 2-pin AC plug model ..... 700 W
U.S. and Canadian models ..... 340 W, 500 VA
Multi-voltage model ..... 905 W
In Standby Condition ..... 3 W
AC Outlet (Multi-voltage, U.S. and Canadian models only)
U.S. and Canadian models
SWITCHED ..... 100 W (0.8 A) MAX
Multi-voltage model
SWITCHED ..... 100 W MAX
Dimensions ..... 420 (W) × 160 (H) × 300 (D) mm
16-9/16 (W) × 6-5/16 (H) × 11-13/16 (D) in
Weight (without package)
VSX-605S ..... 9.8 kg (21 lb 10 oz)
VSX-635S ..... 9.6 kg (21 lb 3 oz)

### Furnished Parts

FM Antenna ..... 1
AM Loop Antenna ..... 1
Dry Cell Batteries (AA/R6P) ..... 2
Remote Control Unit ..... 1
Mini-Repeater ..... 1
Main-Repeater ..... 1
Operating Instructions ..... 1

***NOTE:***
*Specifications and the design are subject to possible modifications without notice, due to improvements.*

## *Dear Customer:*

Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion-and, most importantly, without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

**To establish a safe level:**
- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

**Once you have established a comfortable sound level:**
- Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

## We Want You Listening For A Lifetime

Used wisely, your new sound equipment will provide a lifetime of fun and enjoyment. Since hearing damage from loud noise is often undetectable until it is too late, this manufacturer and the Electronic Industries Association's Consumer Electronics Group recommend you avoid prolonged exposure to excessive noise. This list of sound levels is included for your protection.

| Decibel Level | Example |
|---|---|
| 30 | Quiet library, soft whispers |
| 40 | Living room, refrigerator, bedroom away from traffic |
| 50 | Light traffic, normal conversation, quiet office |
| 60 | Air conditioner at 20 feet, sewing machine |
| 70 | Vacuum cleaner, hair dryer, noisy restaurant |
| 80 | Average city traffic, garbage disposals, alarm clock at two feet. |

**THE FOLLOWING NOISES CAN BE DANGEROUS UNDER CONSTANT EXPOSURE**

| | |
|---|---|
| 90 | Subway, motorcycle, truck traffic, lawn mower |
| 100 | Garbage truck, chain saw, pneumatic drill |
| 120 | Rock band concert in front of speakers, thunderclap |
| 140 | Gunshot blast, jet plane |
| 180 | Rocket launching pad |

Information courtesy of the Deafness Research Foundation.

### MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzine, insecticide sprays or other chemicals on or near this unit, since these will corrode the surfaces.

Published by Pioneer Electronic Corporation.
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<95J00VF0Z00> Printed In Singapore <ARB7059-A>